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## The Aurignacian of the Grotte du Figuier (Ardèche, France). Re-discussing the lithic industry of level 2 in its archaeological context

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**SUMMARY -** *The Aurignacian of the Grotte du Figuier (Ardèche, France). Re-discussing the lithic industry of level 2 in its archaeological context* - In the late 1960s the Aurignacian of the Grotte du Figuier (Saint-Martin-d'Ardèche, Ardèche, France) was interpreted to represent an evolved stage of this technocomplex. Approaching the lithic industry typo-technologically, this paper re-evaluates that classification. Methodologically, this work focuses on a technological reading and socio-economic comprehension of human productions. A key for addressing the chronological position of the Grotte du Figuier record within the Aurignacian framework consisted in both artefacts drawn from the wet-screened backdirt and a detailed examination of the bladelet productions. In fact, different arguments engage the possibility of a Protoaurignacian occupation, fitting well in the regional pattern. In synopsis with both typological data already collected in the 1960s and considerations on the organic industry, this anthropization seems to have been the only one during the Aurignacian.

**RIASSUNTO -** *L'Aurignaziano della Grotta di Figuier (Ardèche, Francia). Riesame dell'industria litica del livello 2 nel suo contesto archeologico* - Fin dagli anni '60 del secolo scorso il livello aurignaziano della Grotta di Figuier (Saint-Martin-d'Ardèche, Ardèche, Francia) è stato attribuito a una fase evoluta di questo tecno-complesso. Con il presente lavoro s'intende riesaminare tale attribuzione, partendo da uno studio tipo-tecnologico del materiale litico. L'analisi si è basata sulla lettura tecnologica dell'industria litica e sull'interpretazione delle produzioni umane dal punto di visto socio-economico. Per stabilire la posizione cronologica del sito all'interno del tecno-complesso aurignaziano sono stati presi in considerazione da un lato il materiale litico proveniente dalla setacciatura del deposito scavato in antico, e dall'altro un'analisi dettagliata della produzione lamellare. Infatti, vari fattori concorrono a ipotizzare piuttosto un'occupazione protoaurignaziana per la Grotta du Figuier, che ben si adatterebbe altresì al modello regionale proposto per questa fase iniziale dell'Aurignaziano. Considerando i dati tipologici degli studi precedenti e le osservazioni fatte sull'industria in materia dura animale, sembra evidente che la sola occupazione percepibile a livello archeologico sia quella protoaurignaziana.

**Key words:** France, Ardèche, Early Upper Palaeolithic, Protoaurignacian, cave, lithic typo-technology  
**Parole chiave:** Francia, Ardèche, Paleolitico superiore antico, Protoaurignaziano, grotta, tipo-tecnologica litica

### 1. INTRODUCTION

Looking at the Aurignacian framework of southeastern France, mainly Protoaurignacian and Early Aurignacian occupations are notable. Stratigraphically, the first predate the latter (Bazile & Sicard 1999; Slimak *et al.* 2006a). Some forty years ago, the Grotte du Figuier (Fig. 1) figured among the first Aurignacian sites to be published for this area. Based on a small set of stone artefacts, Jean Combier merely classified the assemblage as a developed Aurignacian, without specifying this interpretation any further (Combier 1967). First, he did not see it as being classical (i.e. early). Second, the existence of a Protoaurignacian was not established at that time. In consequence, Jean Combier saw the Aurignacian occupation at the Grotte du Figuier to have been of a more evolved stage. A reassessment of the question seemed promising. Regional comparative data, now sufficiently available, as well as new lithic artefacts from the wet-screened backdirt allowed a reassessment of

the assemblage. Some key results are outlined in this paper, contributing to a better understanding of the Early Upper Palaeolithic in southeastern France<sup>1</sup>.

### 2. SETTING

The Grotte du Figuier contains an important Middle and Upper Palaeolithic site in the middle Rhone Valley (Combier 1967; Fig. 1). Research began in the late 19<sup>th</sup> century, exploring the sediments of the entrance hall (Chiron 1888; Raymond 1893; Chiron 1896; Chiron & Gaillard

<sup>1</sup> In an abridged way, this paper summarizes the output of a Master thesis (Woerz 2006), presented at the 49<sup>th</sup> Annual Meeting of the Hugo Obermaier Society 2007 in Trento. A more detailed report is given elsewhere (Woerz 2008).

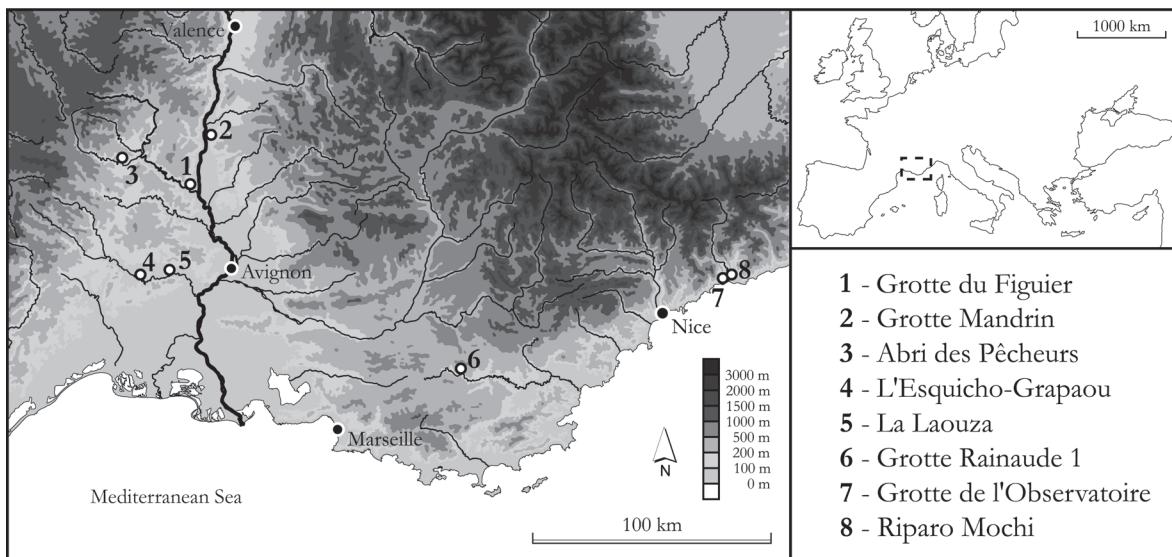


Fig. 1 - Location of the Grotte du Figuier and other Protoaurignacian sites of southeastern France and neighboring regions.

Fig. 1 - Localizzazione della Grotta du Figuier e degli altri siti protoaurignaziani del sud ovest della Francia e delle regioni adiacenti.

1911; Raymond 1911). Triggered by the discovery of an extension, amateurs began excavating untouched sectors in the 1940s (Combier 1967). In the 1970s the wet screening of the backdirt left by the different investigators marked the end of the fieldwork (Combier 1977).

In my reassessment of the site's Aurignacian occupation(s) I focused on the 1940s' data, as Jean Combier did in 1967. However, the archaeological collections from that period do not represent coherent assemblages. Elements result from a selection at the moment of excavation and suffered dispersal between different excavators. Field methods remained rather coarse and do not satisfy modern standards. Due to different places of conservation and amenability, I could examine only 34 artefacts belonging to level 2, the Aurignacian layer of the 1940s' excavations. Two further artefacts studied originate from the 1940s' field campaigns as well, but lack stratigraphic information. In addition, a further twelve implements taken into account (notably bladelet elements) derive from the wet-screened backdirt. Typologically and/or technologically, these latter 14 pieces are compatible with the productions of level 2 that I had access to. For the backdirt elements I cannot know if they date to the 1940s' excavations or to the late 19<sup>th</sup> century investigations (or both). Nevertheless, I assimilated these twelve pieces in order to broaden my very small data set and, first and foremost, my basis for discussion. In total, I included 48 lithics in my dataset<sup>2</sup>. My approach is based on concep-

tual and methodological tools regarding the technological reading and socio-economic comprehension of human productions. However, I could not extensively investigate the techno-economic system underlying the lithic elements of level 2 (cf. for example Geneste 1991). Besides regional references, further comparison resulted from assemblages of southwestern France as the so-called "Aquitainian model" seems, in terms of archaeo-stratigraphy, more and more valid for Western Europe as a whole (cf. Le Brun-Ricalens 2005; Bon 2006; Le Brun-Ricalens & Bordes 2007). A second pillar of my work consisted in Jean Combier's typological data, which he collected from the entire material of level 2, as well as his observations on the organic industry of this archaeological layer (Combier 1967).

### 3. LITHIC PRODUCTIONS

In recent years, bladelet production has demonstrated to provide excellent markers to structure the Aurignacian chronologically (Le Brun-Ricalens 2005). Before approaching this aspect for the Grotte du Figuier, some information concerning the blade manufacturing in level 2 shall be provided: on the basis of 22 blades and blade fragments (some transformed into tools), I noted six different kinds of productions. Unfortunately, my sample is too small to estimate the relative importance of each of them within the litho-technical system of level 2. Conceptually linked, all elements display an unidirectional character. Both blade products themselves, and installed crests guarantee the maintenance and reconfiguration of the debited volumes. Striking platforms remain generally smooth; butts are proof of a systematic abrasion of the core edges in direction of the production surface. Extraction consists in applying a soft direct percussion, most probably an organic hammer. All products tend to be straight in profile. These general characteristics fit well in the image of Aurignacian blade productions (cf. for example Hahn & Owen 1985; Tixier & Reduron 1991; Klaric 1999; Teyssandier 2000; Bon 2002; Bordes 2006). What stands out is the

<sup>2</sup> The excavators of the 1940s deposited only parts of their collections in a public institution, the Regional Museum of Prehistory in Orgnac-l'Aven (Ardèche), and kept the remainder in their holdings. The material drawn from the backdirt in the 1970s, estimated at several ten thousand pieces, is completely bequeathed to this latter facility. Only these assemblages are accessible at the moment. The absolute number of the 1940s' artefacts is unknown. In his work, Jean Combier analyzed 117 tools *sensu stricto*.

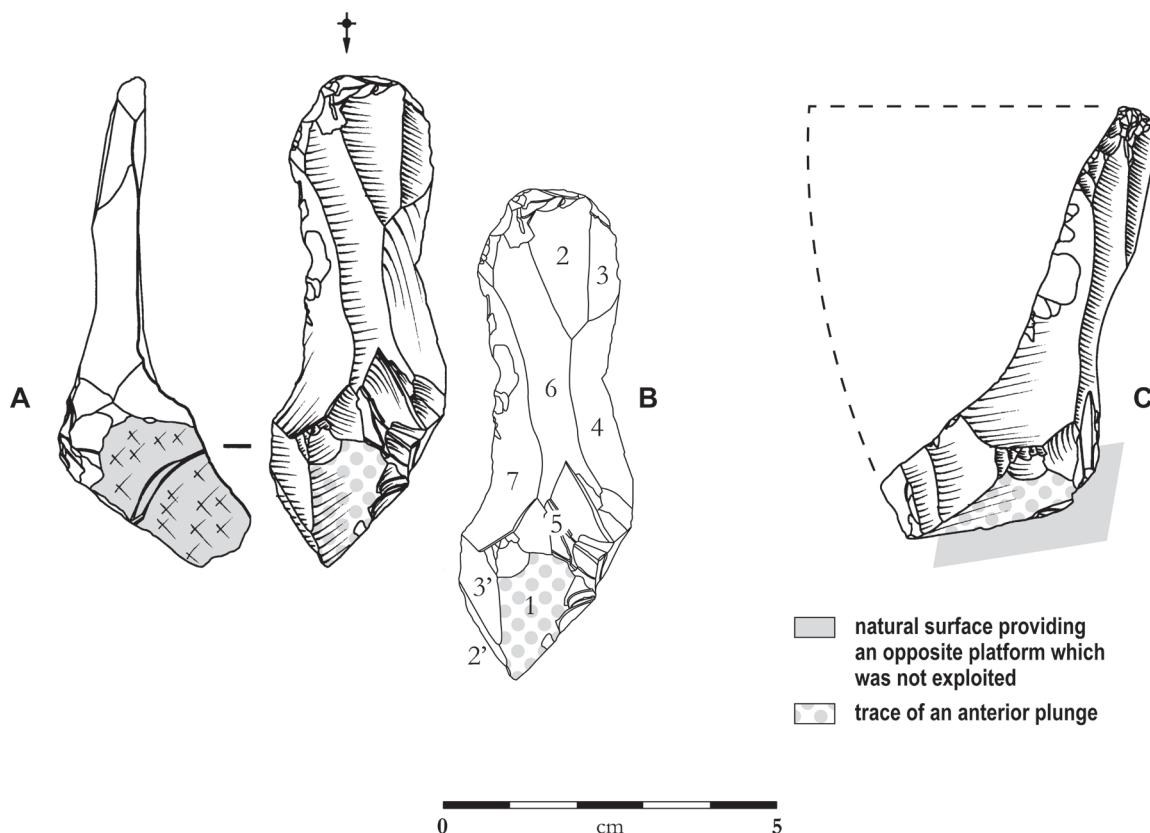


Fig. 2 - Grotte du Figuier (Ardèche, France). Plunged blade element carrying off a hinge break and thus purging the production surface of the volume it resulted from. At its basis, the artefact preserved the trace of an anterior plunge arguing for the recurrence of this modality within the reduction sequence. On the back of this part, a natural surface provided an opposite platform that was not used to eliminate the hinge. Thus, I interpret the plunge of this element as having been controlled. This suggests that the behaviour of the knapper was culturally conditioned, since he applied a more risky solution to his problem than technically necessary. Simultaneously however, he reconfigured the longitudinal and transversal convexity of the exploited volume (A. and B. morphological orientation and key for reading; C. technical orientation and put-in-situation).

*Fig. 2 - Grotta du Figuier (Ardèche, Francia). Lama oltrepassata che ha permesso l'asportazione di un ripiegato sulla superficie di sfruttamento del blocco. All'estremità prossimale del supporto è ancora visibile la traccia di un oltrepassaggio precedente, modalità questa ricorrente nella sequenza produttiva. Sulla faccia opposta si può notare la presenza di una superficie naturale che avrebbe potuto fornire un piano di percussione opposto, ma che invece non è stato sfruttato per eliminare l'incidente di riflessione. Probabilmente la scelta dell'oltrepassaggio è stata voluta e ricercata. Questa ipotesi suggerisce che il comportamento dello scheggiatore sia stato condizionato culturalmente, dal momento che egli ha adottato una soluzione al problema tecnicamente più rischiosa di quanto non fosse necessario. Allo stesso tempo questo gli ha permesso di riconfigurare le convessità longitudinale e trasversale del volume sfruttato (A. e B. orientamento secondo l'asse morfologico e chiave di lettura; C. orientamento tecnico e restituzione dinamica del supporto).*

presence of elements interpreted as voluntarily plunged in order to maintain and reconfigure the debited volumes (Fig. 2). The role that this feature plays in the litho-technical system of level 2 remains unanswered as well. On the regional level, this modality characterizes the blade productions at the Protoaurignacian site of La Lauza and L'Esquicho Grapau in the Gardon valley (Fig. 1), where it was systematically applied (Sicard 1994, 1995<sup>3</sup>).

Associated with level 2 are four bladelets and bladelet fragments as well as six bladelet cores. All flaked implements exhibit a straight to slightly curved profile. They is-

sue from a unidirectional production concept. In possessing a positive versant, two of them had been extracted within a “débitage on the edge” type. The exploited volumes of my dataset display the production of bladelets on carinated pieces (3), on supports of the type “débitage on the edge” (2) and on prismatic cores (1 artefact) generating heterogeneous blank sizes of considerably straight profiles. With regards to concepts and objectives, they refer to the early stages of the Aurignacian (Protoaurignacian and Early Aurignacian). Within the backdirt collection, I found eight Dufour bladelets<sup>4</sup> of different forms of Demars and Lau-

<sup>3</sup> The Aurignacian of the Grotte du Renne at Arcy-sur-Cure, resembling very much the Protoaurignacian assemblages of La Lauza and L'Esquicho Grapau, shows a comparable formula within its blade production (Bon & Bodu 2002).

<sup>4</sup> For every bladelet porting a marginal inverse retouch on one of its edges associated or not to a direct marginal retouch on the opposite edge I applied the generic denomination “Dufour bladelet”.

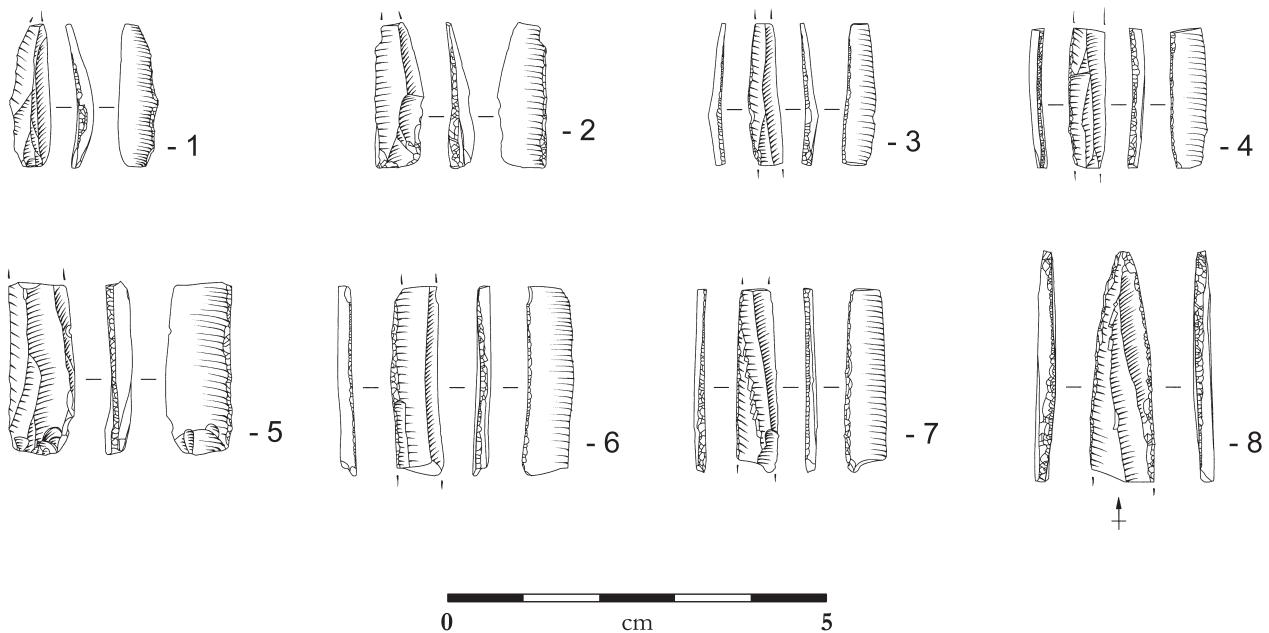


Fig. 3 - Grotte du Figuier (Ardèche, France). Different sized bladelets of the Dufour family (1-7) and a retouched point (8) from the backdirt. The elements 5-7 approach big straight Dufour bladelets.

Fig. 3 - Grotta du Figuier (Ardeche, Francia). Lamelle Dufour di differenti dimensioni (1-7) e punta ritoccata (8) provenienti dal materiale rinvenuto durante la setacciatura del riempimento del deposito scavato in antico. Gli elementi 5-7 corrispondono a delle lamelle Dufour di grandi dimensioni.

rent's Dufour sub-type (Demars & Laurent 1989) as well as a distal fragment of a directly retouched point ("Krems point"). In terms of production, seven of the Dufours and the point are compatible with the volumetric concepts mentioned. Due to their morphology and degree of investment, the larger elements among this sample probably refer to prismatic or pyramidal volumes. Certainly they originate from a different operational scheme (or schemes) than the smaller specimens (Fig. 3). One Dufour bladelet presents, besides converging edges, a positive versant. Together with both three other lithics from the backdirt and one artefact from the 1940s' excavations lacking stratigraphical information, this implement argues in favour of the presence of a production mode being very close to the so called "crossed scheme" exclusively known from Protoaurignacian contexts (Slimak *et al.* 2006a, 2006b). These five lithics reflect both moments of initialisation (Fig. 4.4) maintenance and reconfiguration (2-3) as well as sequences of production of researched blanks (5-6). One of the four stratigraphically assured bladelets (Fig. 4.1) follows the same line. In conjunction with the 1940s' element missing stratigraphic context, this specimen argues for the presence of that production mode in level 2. Among the elements related to the Dufour family, three specimen resemble big straight Dufour bladelets (Fig. 3.5-7) providing further arguments, like the distal fragment of a retouched point (Fig. 3.8), for a Protoaurignacian occupation at the Grotte du Figuier (cf. Le Brun-Ricalens & Bordes 2007). Whereas I cannot judge for these latter ones whether they belong to the 1940s' excavations or not, big straight bladelets of the Dufour family are essential in every Protoaurignacian assemblage of southeastern France and adjacent regions (Slimak *et al.* 2006a, 2006b). Chances are that the mentioned specimens from the backdirt of the Grotte Figuier belong in fact to level 2.

Besides elements pointing simply to the early stages of the Aurignacian (Protoaurignacian and Early Aurignacian), highly diagnostic pieces refer exclusively to Protoaurignacian times.

On the other hand, I exclude the possibility of Recent and Final Aurignacian occupations in level 2: volumes allowing the *débitage* of twisted products (i.e. cores of the types "nosed end scraper" and "busked burin"; Bordes 2005) are neither present among the stratified implements nor the backdirt collection; as well as twisted blanks and small twisted Dufour bladelets of the Roc-de-Combe sub-type (Demars & Laurent 1989). Caminade bladelets (Bordes & Lenoble 2002) also do not figure in the record. Manifestations of a final stage of the Aurignacian, notably in the form of cores of the type "Vachons burin" but also associated products (Pesesse & Michel 2006), are missing as well. Jean Combier's description of the entire industry of the 1940s' excavations and his drawings of the artefacts (Combier 1967) show the same pattern.

#### 4. DISCUSSION AND CONCLUSIONS

These results lead to the question about a possible exclusivity of the Protoaurignacian in level 2. Data supplied by Jean Combier (1967) concerning the typology of the tools as well as the organic artefacts argues in favour of that hypothesis: having accessed all material unearthed during the 1940s' investigations he saw one of the best negative characters of the industry in the rarity of blades with Aurignacian retouch. End scrapers also occurred rarely. The bone and antler industry consisted of just two awls and one soft hammer. Since faunal remains are well preserved in level 2, this scarcity of organic artefacts is likely not due

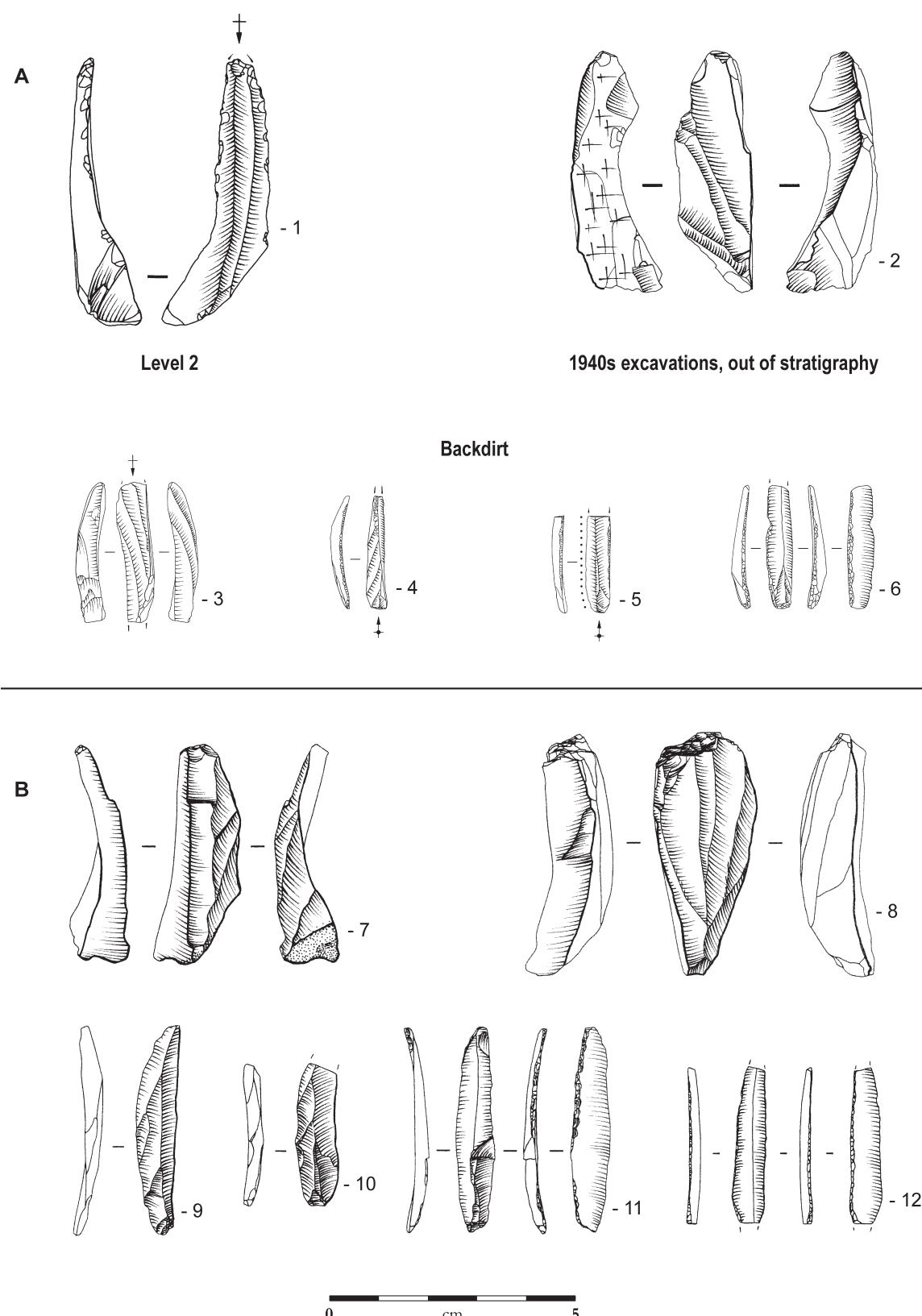


Fig. 4 - Elements related to the crossed scheme at the Grotte du Figuier (A) and the Grotte Mandrin (B; Slimak *et al.* 2006a). 1-3, 7-8. Elements of maintenance and reconfiguration; 4. element of initialisation (crossed bladelet, transformed into a tool); 5-6, 11-12. researched blanks, transformed into tools (6 and 11-12 are Dufour bladelets); 9-10. crossed bladelets initialising a new production sequence of researched blanks. Note the positive facets indicated by the ripples drawn in opposite direction.

Fig. 4 - Elementi in relazione con lo schema incrociato della Grotta du Figuier (A) e della Grotta Mandrin (B) (Slimak *et al.* 2006a). 1-3, 7-8. Prodotti di mantenimento e riconfigurazione; 4. supporto prodotto nella fase d'inizializzazione (lamella incrociata trasformata in strumento); 5-6, 11-12. supporti ricercati e trasformati in strumenti (6, 11 e 12 sono lamelle Dufour); 9-10. lamelle incrociate che segnano l'inizio di una nuova sequenza di produzione. Da notare i positivi indicati dalle ondulazioni disegnate in direzione opposta.

to taphonomic reasons. All of these characteristics imply an absence of common features of the Early Aurignacian (cf. Bazile & Sicard 1999; Slimak *et al.* 2006a). Missing in both the lithic as well as the organic domains of the technical system, I exclude functional causes for this pattern. Moreover, the industry of level 2 found its best analogies in the Aurignacian assemblages of the southwestern French sites Chanlat, Bassaler-Nord and Dufour, thought to reflect an evolved Aurignacian stage (Combier 1967). Recently, a reassessment of the Grotte Dufour record provided evidence for a Protoaurignacian at this site (Bon 2006; Le Brun-Ricalens & Bordes 2007). Thus, it seems likely that the existence of the Protoaurignacian in level 2 is exclusive.

In sum, I could document a production mode very close to the crossed scheme, a production of small bladelets as well as an assumed production of big bladelets. All three originate from distinct operational schemes. This circumstance forges a strong link to the Protoaurignacian of the Grotte Mandrin featuring such a trichotomy within its bladelet productions (Slimak *et al.* 2006a, 2006b). Besides the Grotte Mandrin and most probably the Abri des Pêcheurs (Fig. 1; Slimak *et al.* 2006a), the Grotte du Figuier is the third Protoaurignacian site in southeastern France bearing evidence for the crossed scheme. This specific operational scheme seems more and more to signify a regional signature. Further investigations addressing that issue in terms of space and time will hold promising results. In the case of the Grotte du Figuier, the hypotheses advanced in this paper must be tested in the future: first by the means of further material already unearthed, and second by a return to the field, also hopefully granting a more detailed understanding of the site.

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