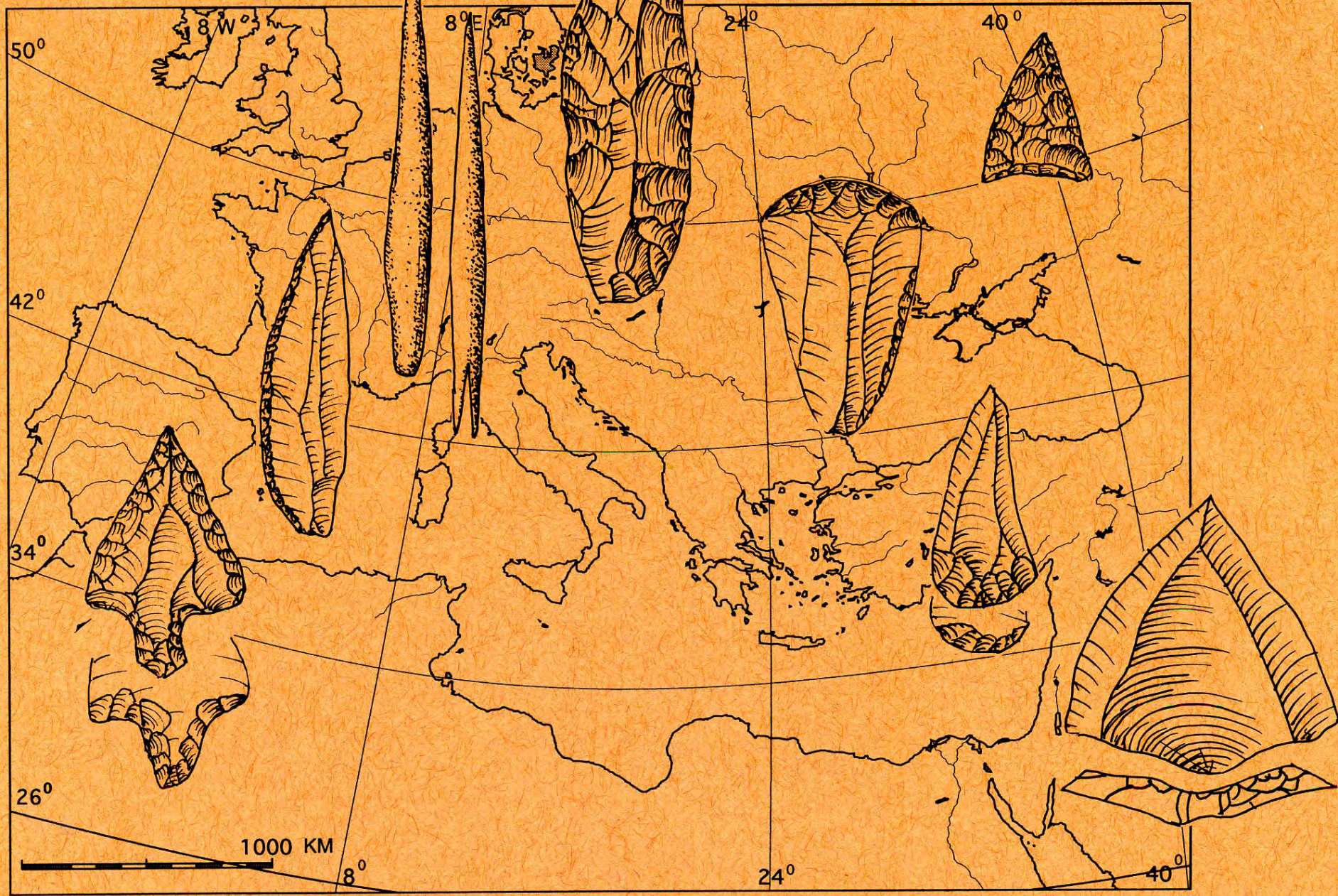


Did Neanderthals think like us?



The discovery of different types of ornaments and pigments of symbolic meaning in Spain, France and Italy, show new aspects of Neanderthals life prior to the advent of modern humans

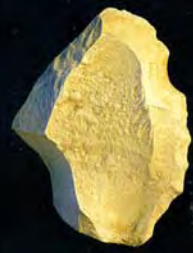
Some types of chipped stone tools that characterise the end of the Middle Palaeolithic period and the advent of modern humans in different regions of Europe



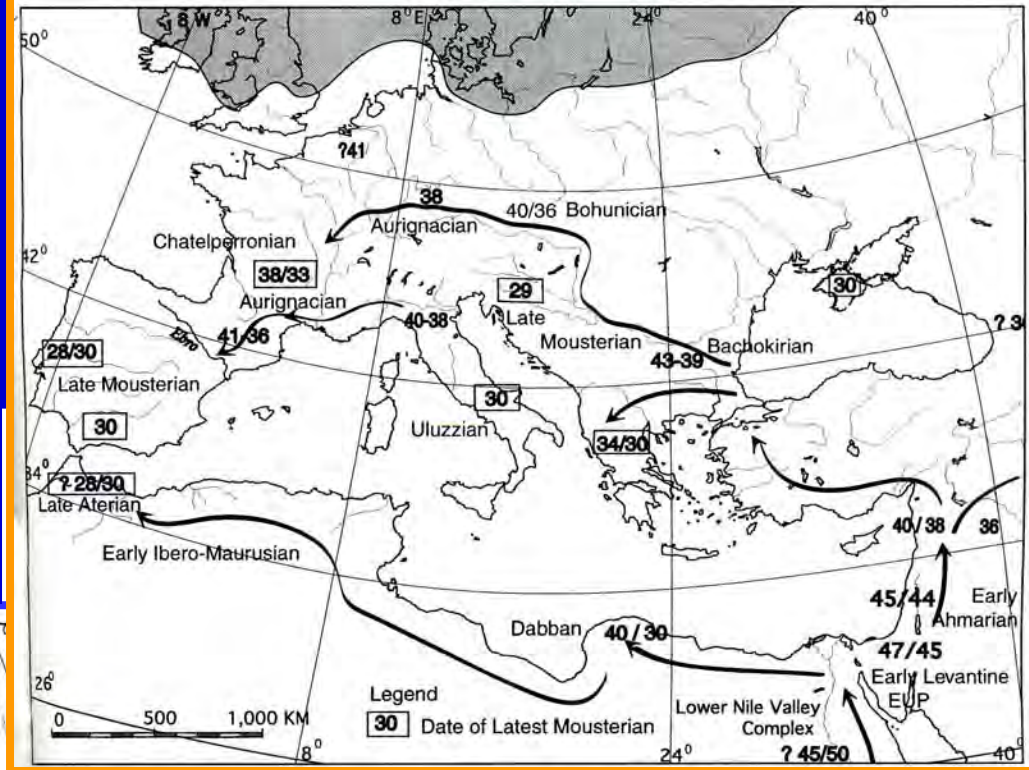
1 : racloir denticulé

2 : racloir convergent

3 : nucléus

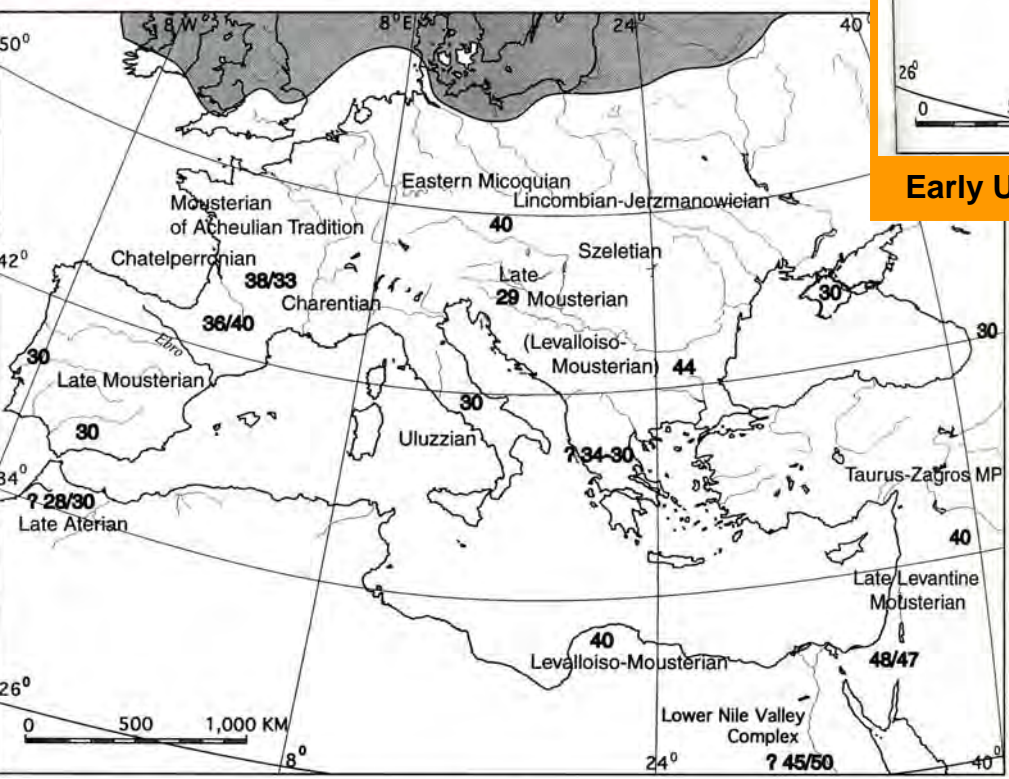


Characteristic Middle Palaeolithic
Levallois Mousterian tools (left) and a
discoid core (right)

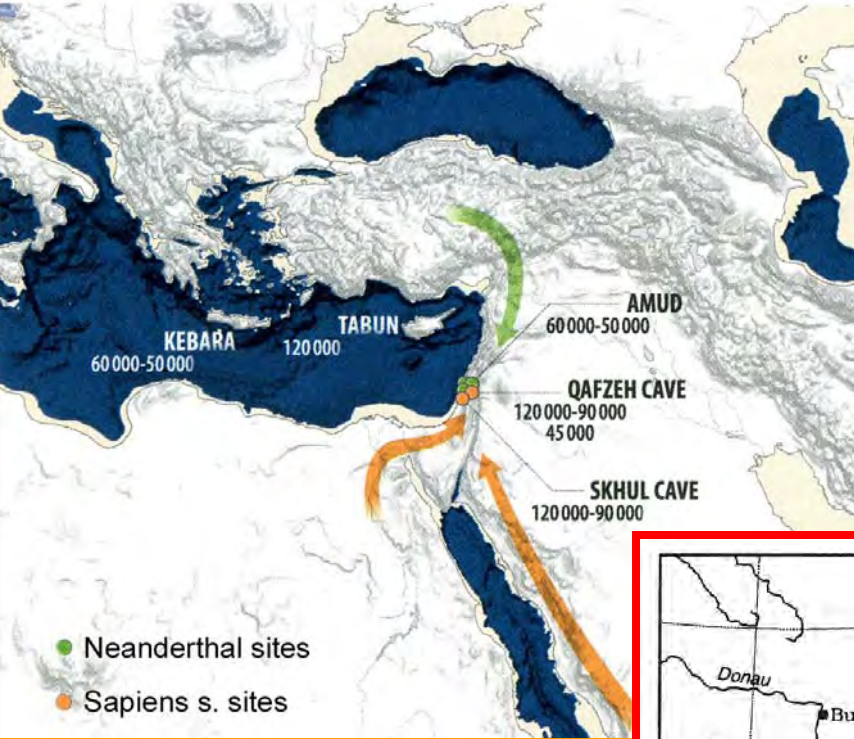


Early Upper Palaeolithic 14C dates for the Mediterranean region

Upper Palaeolithic Aurignacian tools

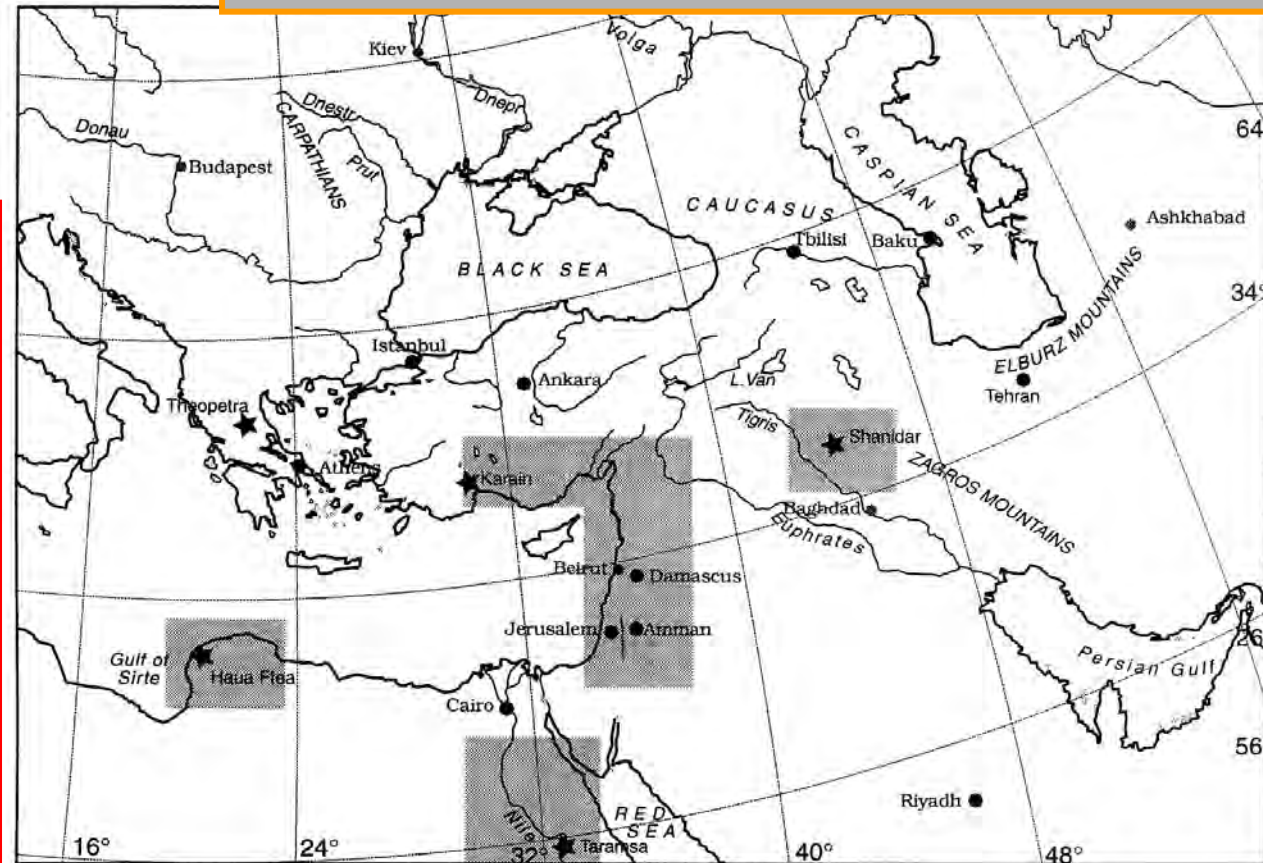


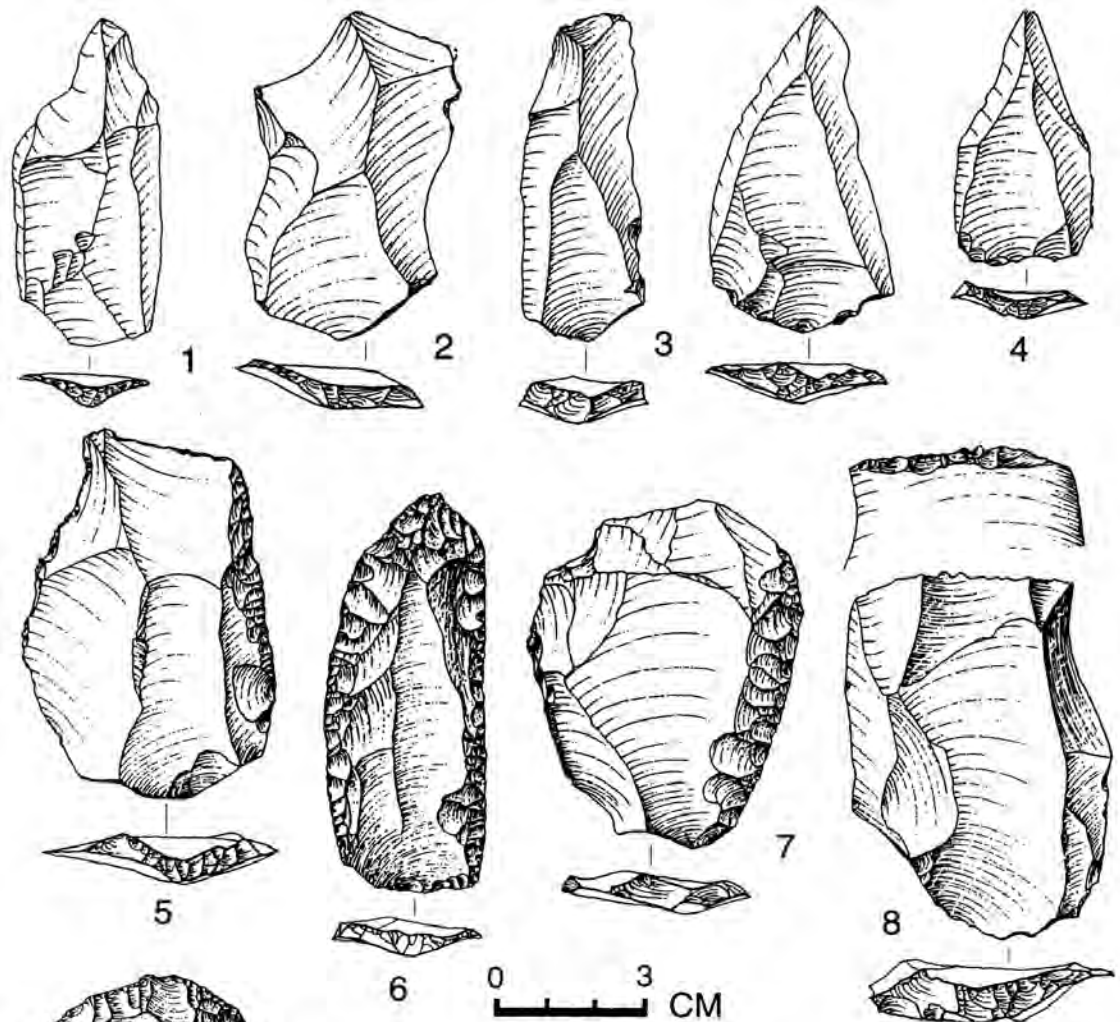
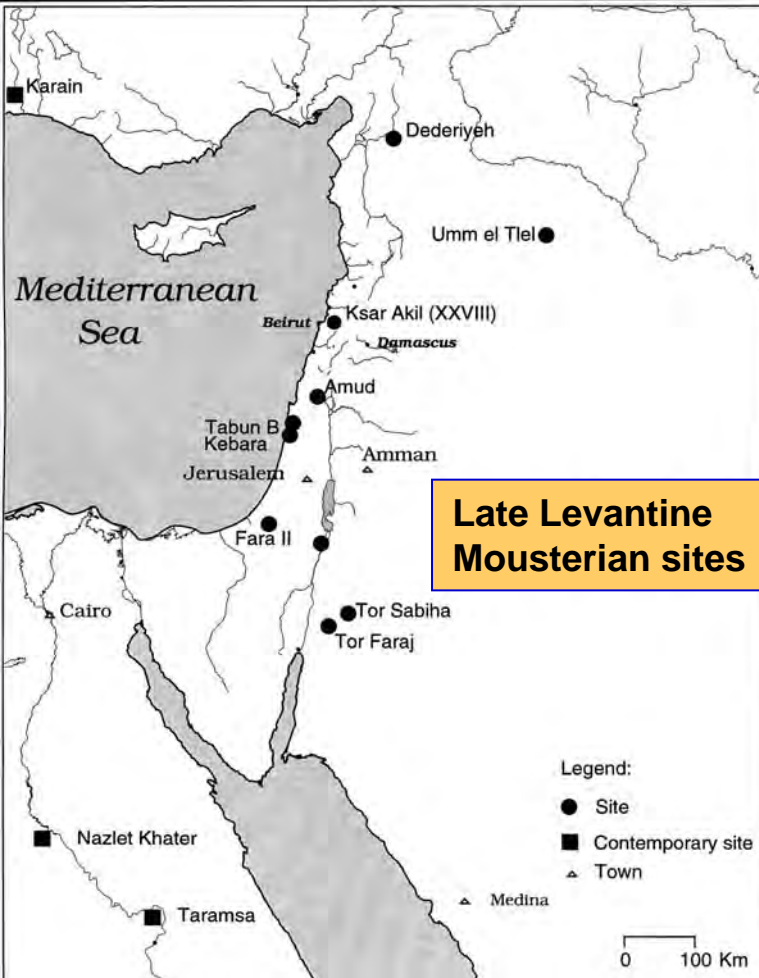
Late Mousterian radiometric dates for the Mediterranean region



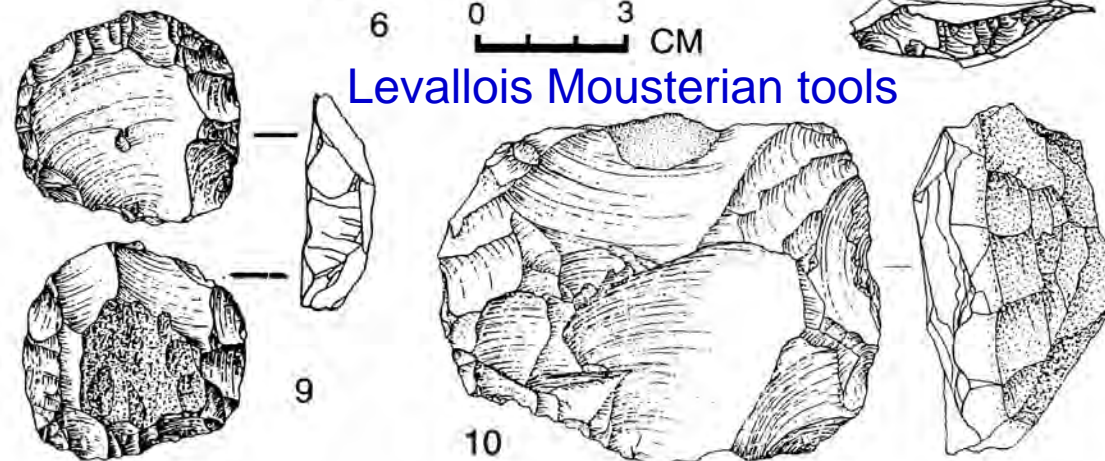
So far the Levant has played a key role in the study of the spread of modern humans from Africa into Europe and Asia. It is from this region that we have the major concentration of burials of both Neanderthals and modern humans

The map on the right shows the most important regions of the eastern Mediterranean and the Levant where the debate on the origin of modern humans has been developed following the discovery of both burials and sites

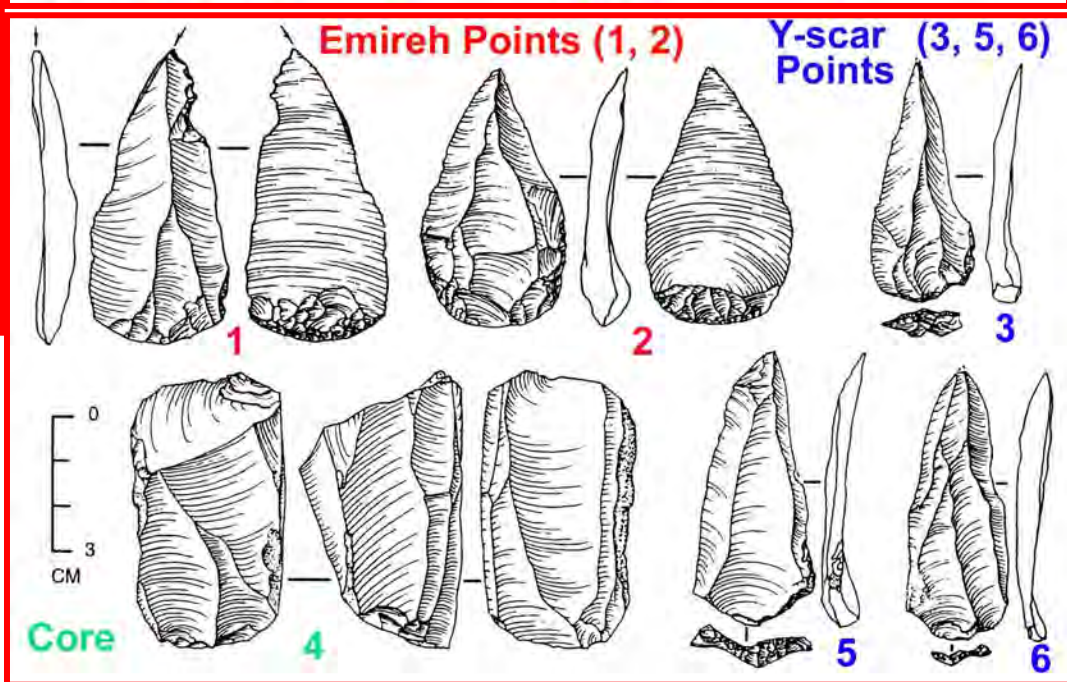
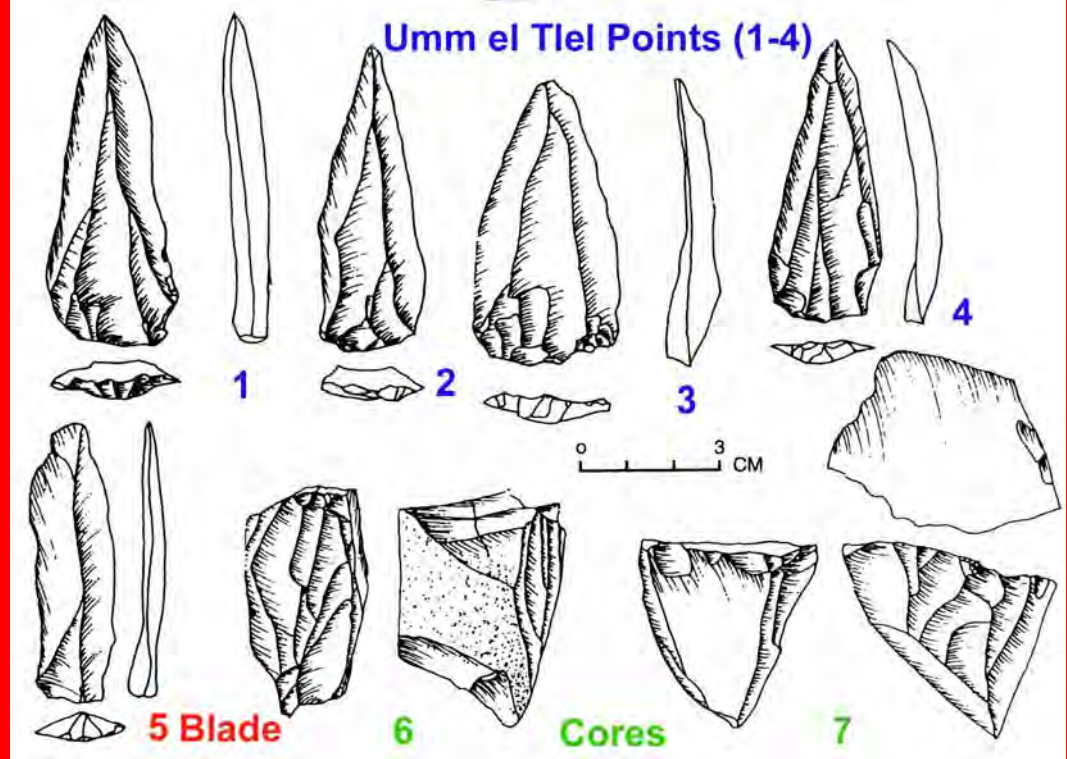
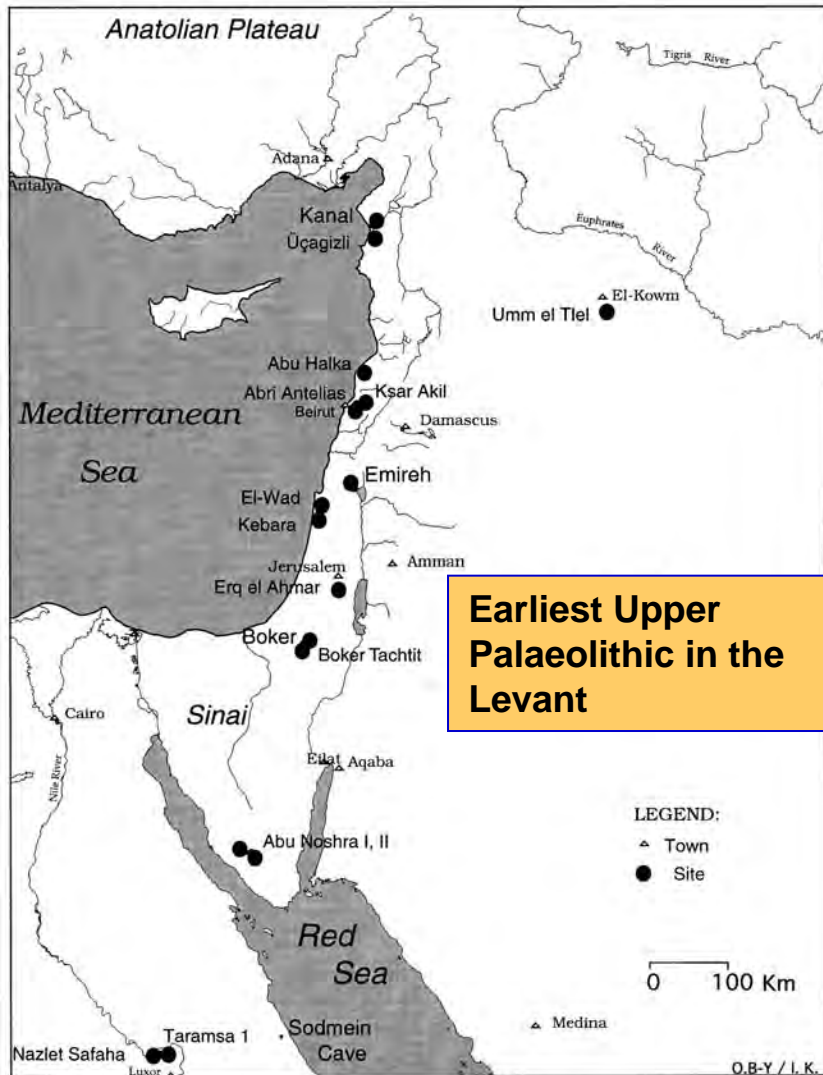




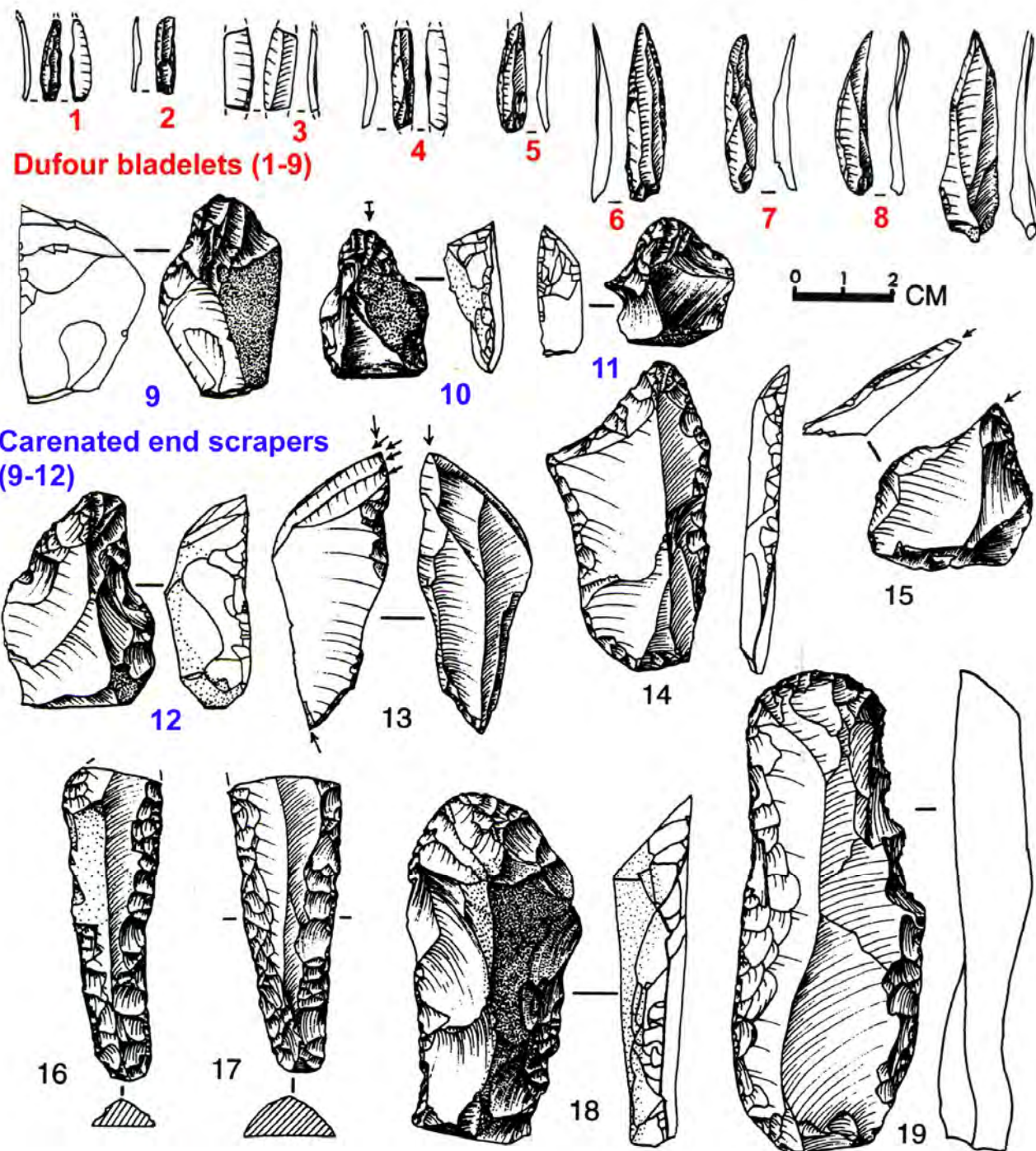
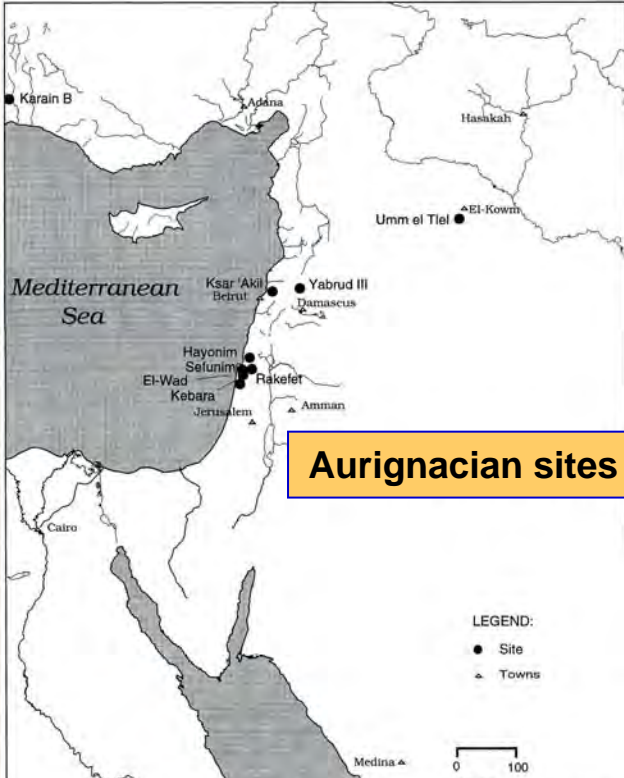
Levallois Mousterian tools



Middle Palaeolithic Levallois Mousterian sites are quite common in the Levant, from which we have evidence even of long stratigraphic sequences from a few caves excavated mainly in Israel



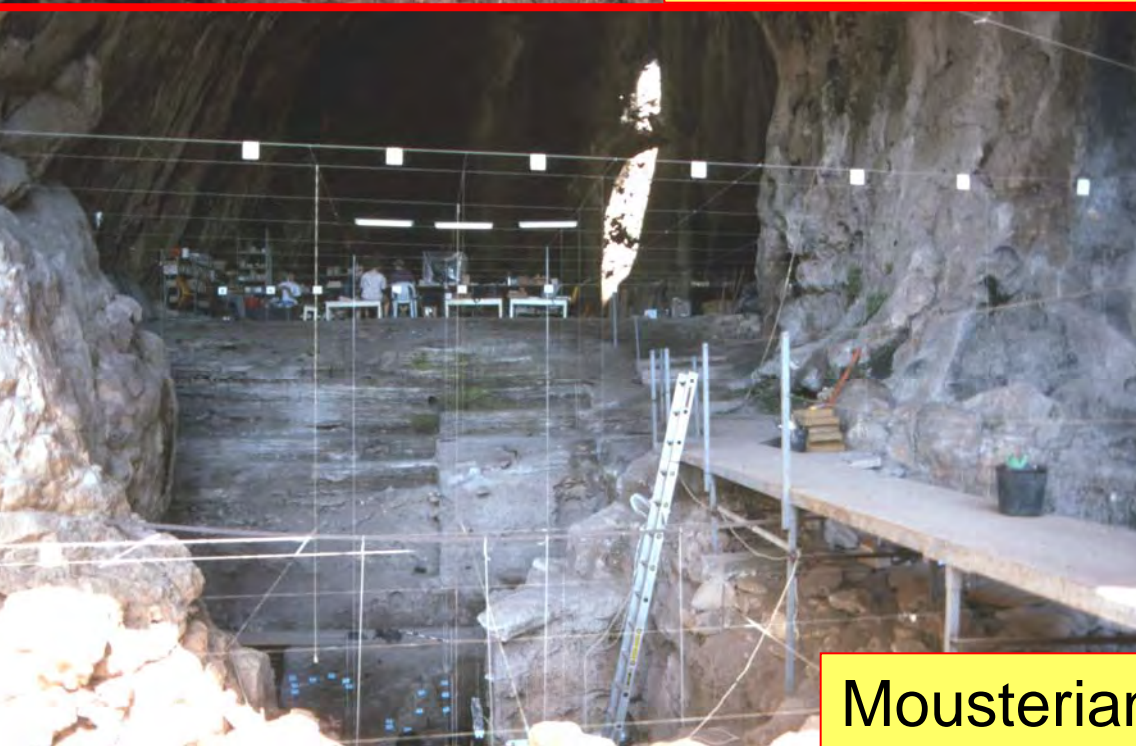
In the same region different aspects of Early Upper Palaeolithic assemblages are known to date (right)



Again in the Levant, the following Upper Palaeolithic period is represented by typical Aurignacian assemblages with Dufour bladelets, carinated end scrapers, a few burins and other blade tools



Cave Hayonim



Mousterian sequence





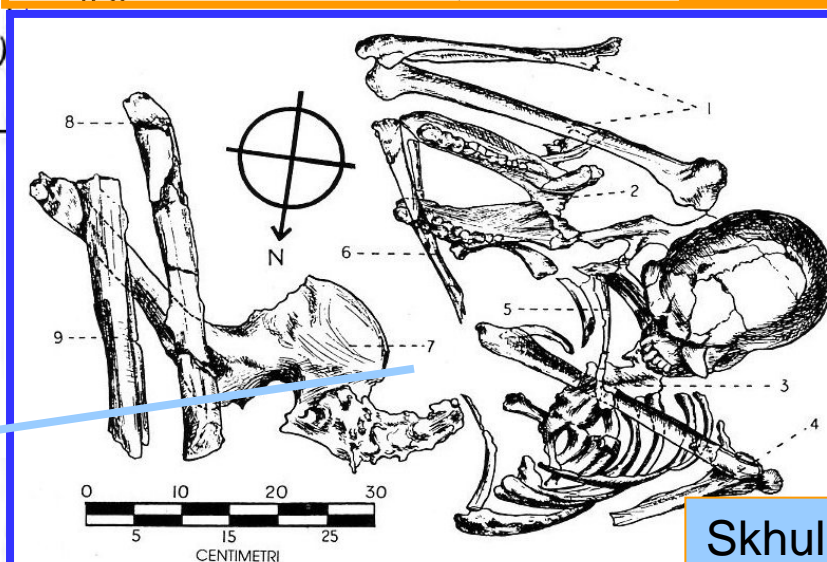
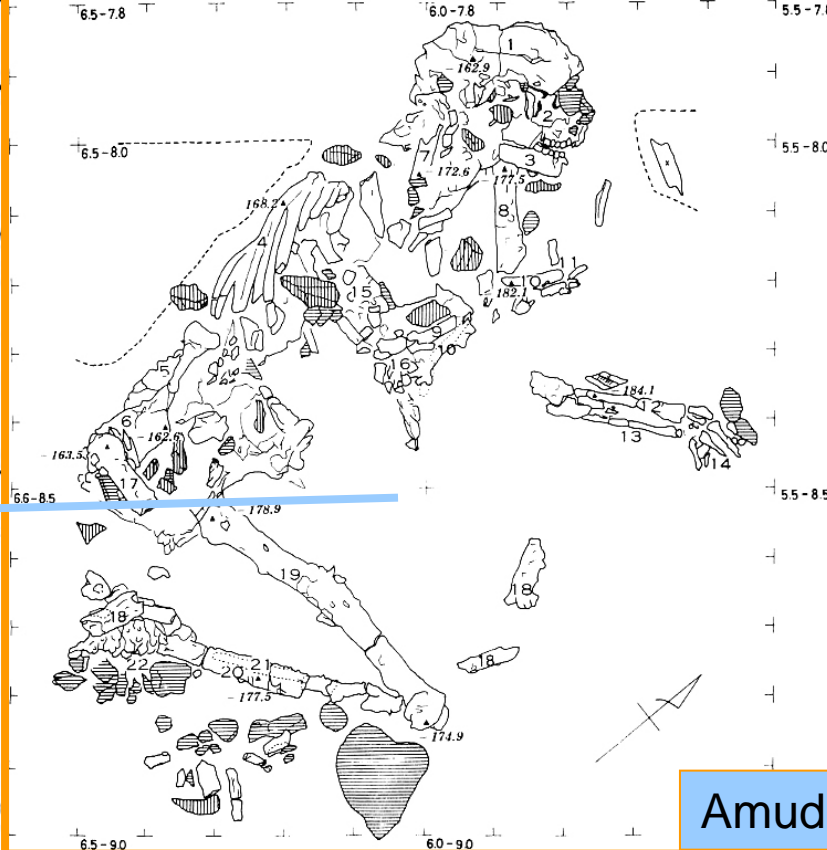
Tabun



Amud

Many Middle and Late Palaeolithic cave sites open along the slopes of Mt. Carmel in Israel. Some showed evidence of long sequences (Hayonim for example), others yielded both Neanderthal and modern human burials (Tabun, Amud)

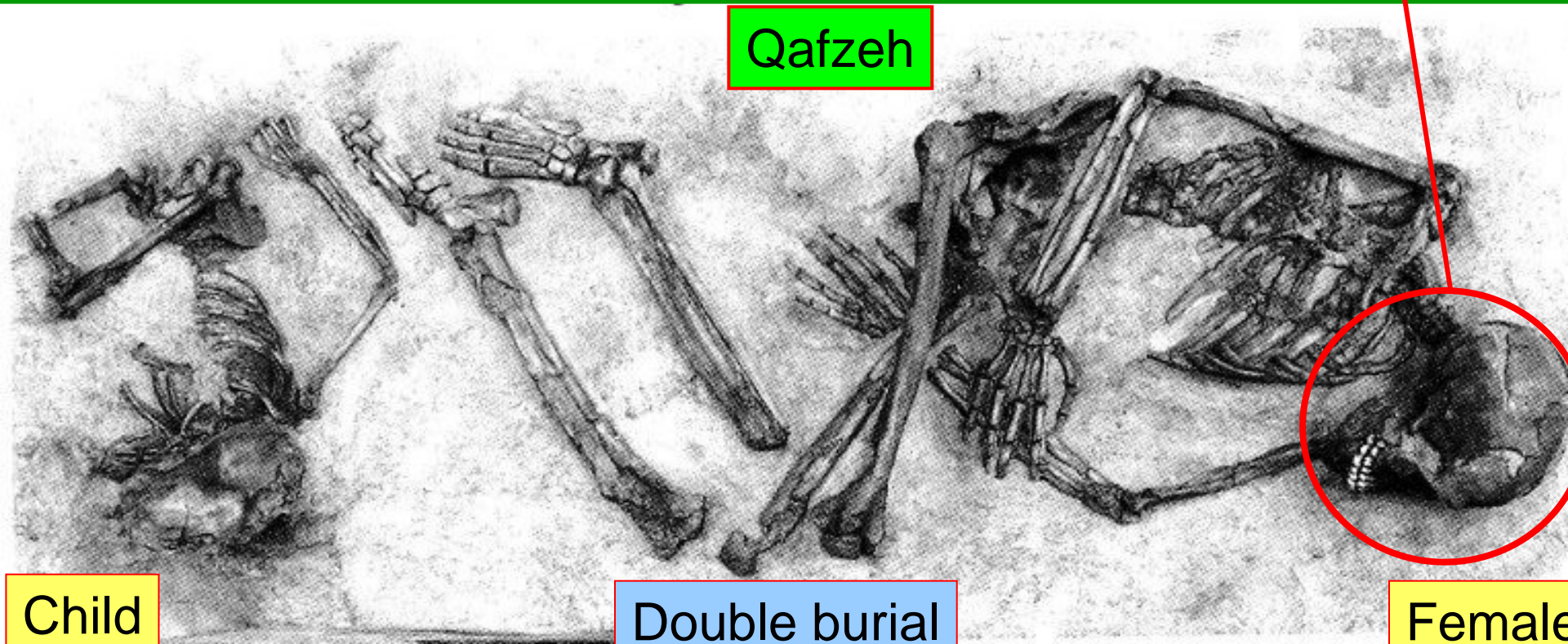
Isotope Stage	Ka B.P.	LEVANTINE ENTITIES	HUMAN FOSSILS
3	46/47	Late Ahmarian complex	<i>Qafzeh UP</i> <i>Ksar 'Akil "Egbert"</i> <i>(both incorporated in Ahmarian industries)</i>
		Levantine Aurignacian	
		Early Ahmarian complex early EUP (=IUP) Emiran	
4	50	Amud Dederiyeh ? (Quneitra?)	Amud Dederiyeh ?
	60	Kebara "TABUN B-type"	Kebara
5	70	Tabun B ? Tor Sabiha Tor Faraj	Shanidar ? in layer D Tabun Woman (= C1)
	80	?	?
5	90	Late "Tabun C-Type" (Quneitra?)	<i>Qafzeh</i> <i>Skhul</i> <i>Tabun II (jaw = C2)</i>
		Qafzeh Skhul	
		Na'amé Hayonim Upper E	
5	100		





One of the Qafzeh burials, belonging to a *S. sapiens* individual has been dated to some 90,000 BP. It is a double deposition (below) with two different individuals in the same grave buried together (see below)

Qafzeh

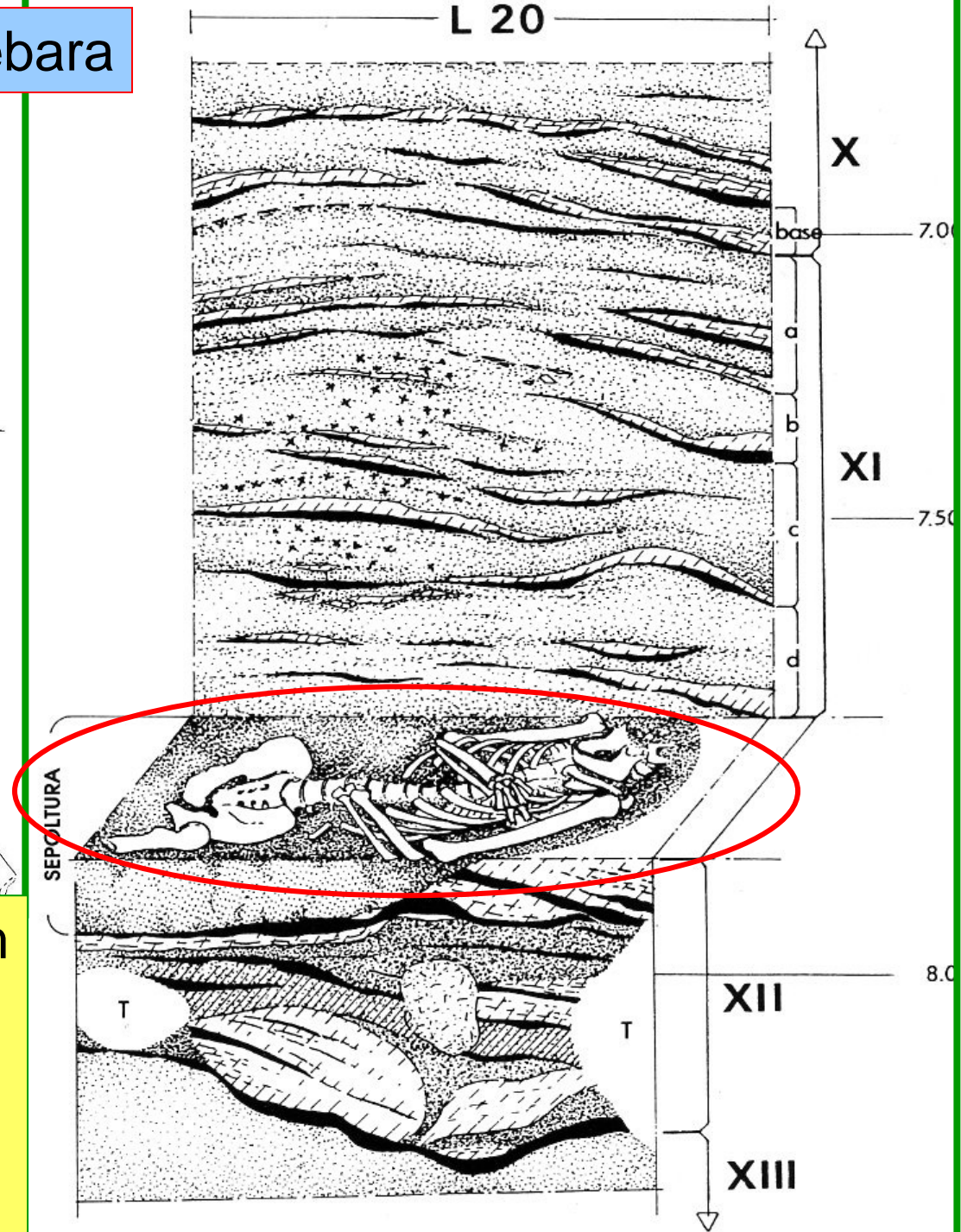
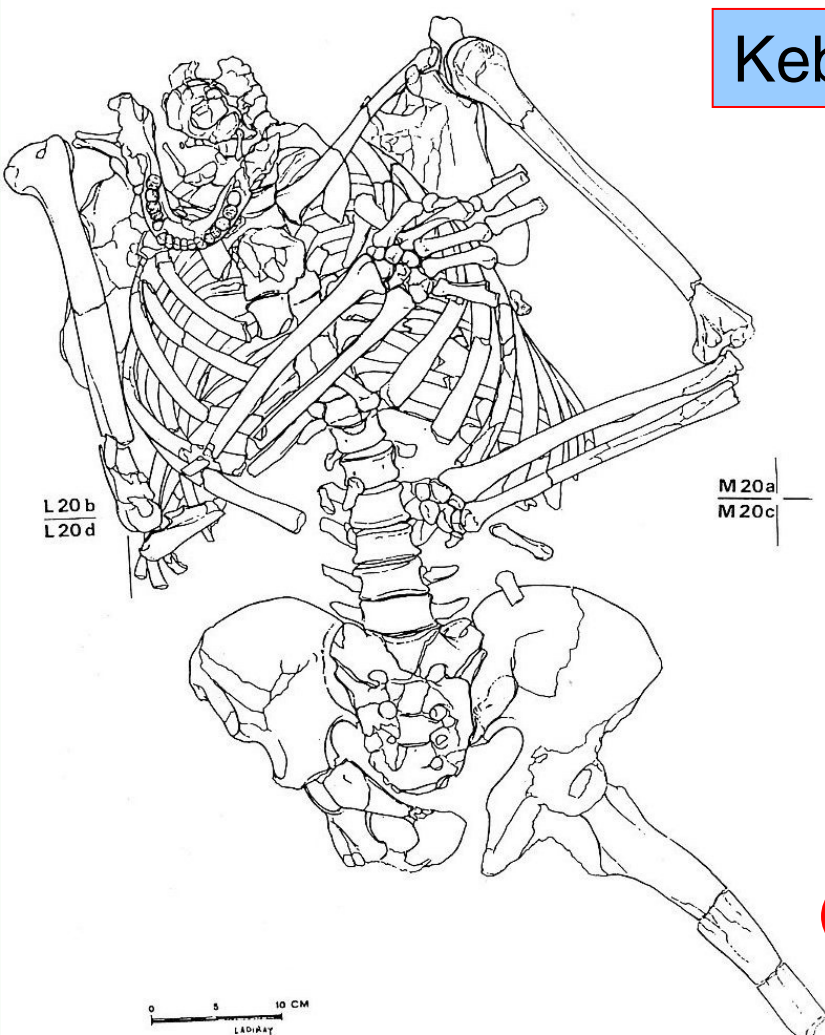


Child

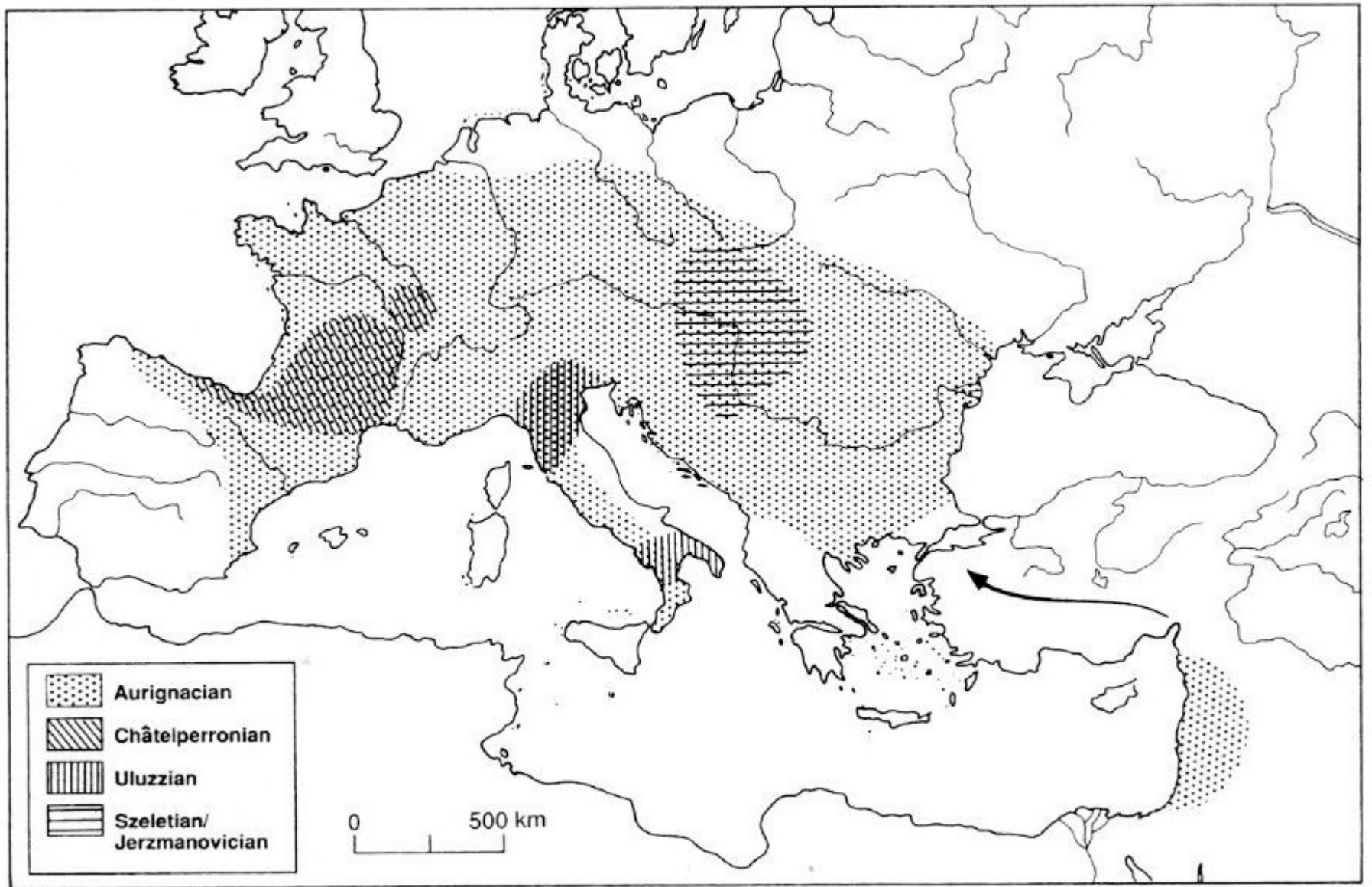
Double burial

Female

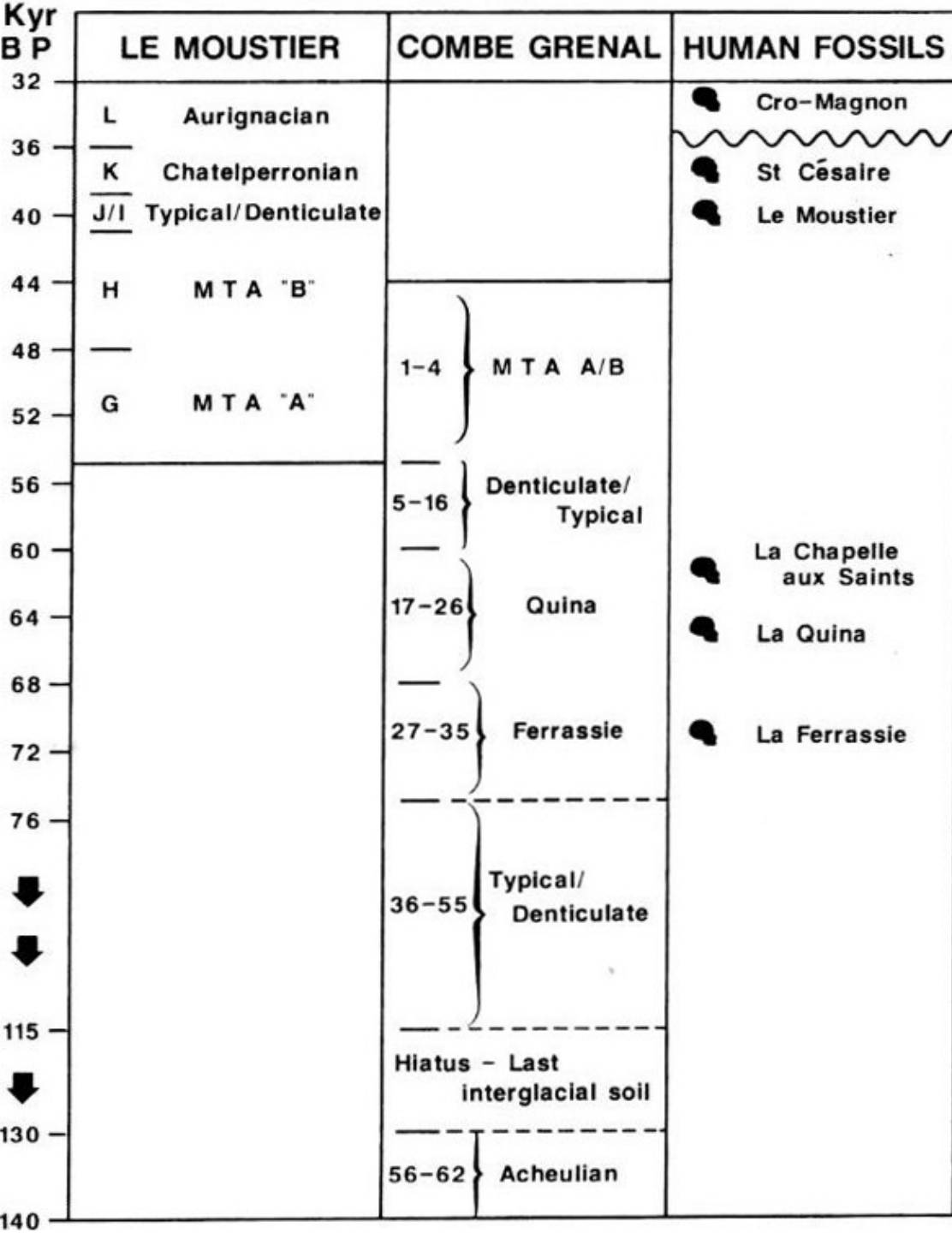
Kebara



The Neanderthal burial from Kebara cave sequence. The skull and the right leg had been removed already in Middle Palaeolithic times



Western Europe ca. 40-35,000 years BP and the Palaeolithic cultural aspects represented in the territory



The scheme shows the Palaeolithic sequences of two rock-shelters of central France (Le Moustier and Combe Grenal) very important to follow events regarding 1) the end of the last Neanderthals 2) the cultural aspects that evolved ca. 40-32,000 years from the present. The period during which the Neanderthals extinguished and modern humans spread over the region



Chatelperronian

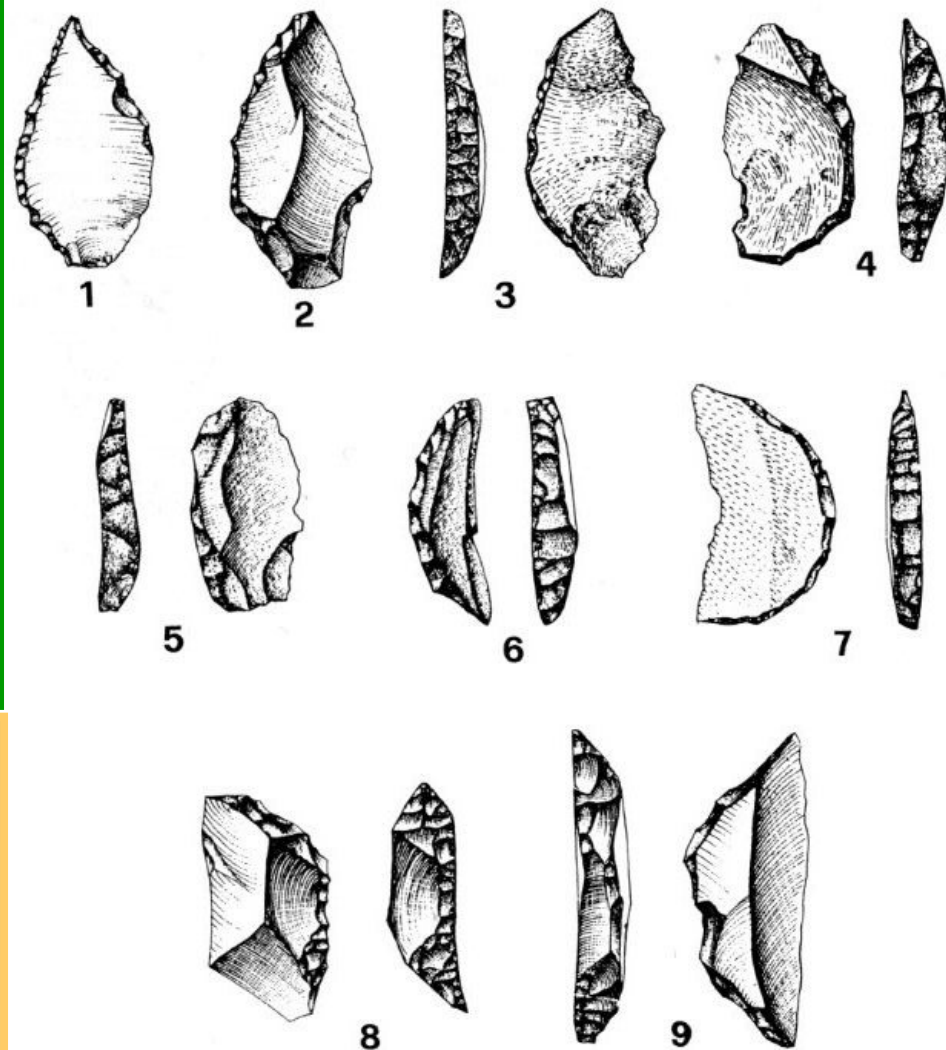
Uluzzian

Around ca. 35,000 BP some new cultural aspects made their appearance in France, (Chatelperronian) and Italy (Uluzzian) as well as other regions of Eurasia.

These aspects unique new traits not only in the chipped stone assemblages, but also in the habitation structures. Their attribution to the last Neanderthals is based mainly on the presence of human remains

1. Roche-au-Loup – 2. Germolles (?) – 3. Belleruche – 4. Fontéchevade – 5. La Chaise
6. Pair-non-Pair – 7. Trou de la Chèvre (Bourdeilles) – 8. La Côte – 9. Canaule – 10. Con
Capelle – 11. La Ferrassie – 12. Laussel – 13. Grotte du Loup et Bos-del-Ser – 14. Bas
15. Isturitz – 16. Gatzarria – 17. Les Tambourets et Rachat – 18. Le Portel – 19. Cauna
Belvis – 20. Cueva Morin – 21. Maroccone et Salviano – 22. San Romano – 23. San Leonar
24. Indicatore – 25. Val Berretta – 26. Poggio Calvello – 27. Foresta Umbra – 28. Falce
Viaggio – 29. Bassin de Atella – 30. Tornola – 31. Torre Testa – 32. Grotte Bernardin
33. Grotte de Parabita – 34. Grotte de Serra Cicora – 35. San Pietro a Maida.

The Uluzzian is a cultural aspect that characterises the last Neanderthals in some regions of the Italian peninsula. Its name comes from the the Cavallo Cave, in the Bay of Uluzzo, in southeastern Italy, where it was first discovered

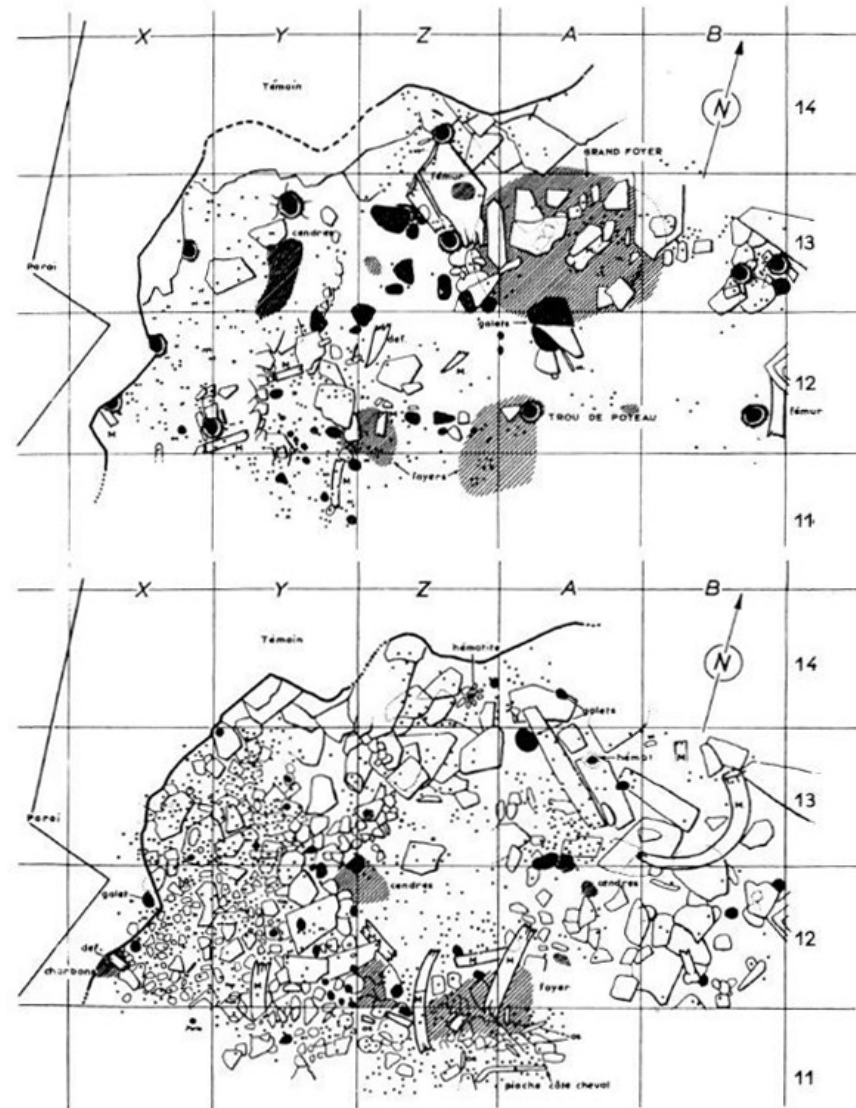


Uluzzo Bay in Apulia

Wide lunate implements of small dimension are typical of the Uluzzian chipped stone assemblages



Grotte du Renne



Complex habitation structures from the Chatelperronian layers

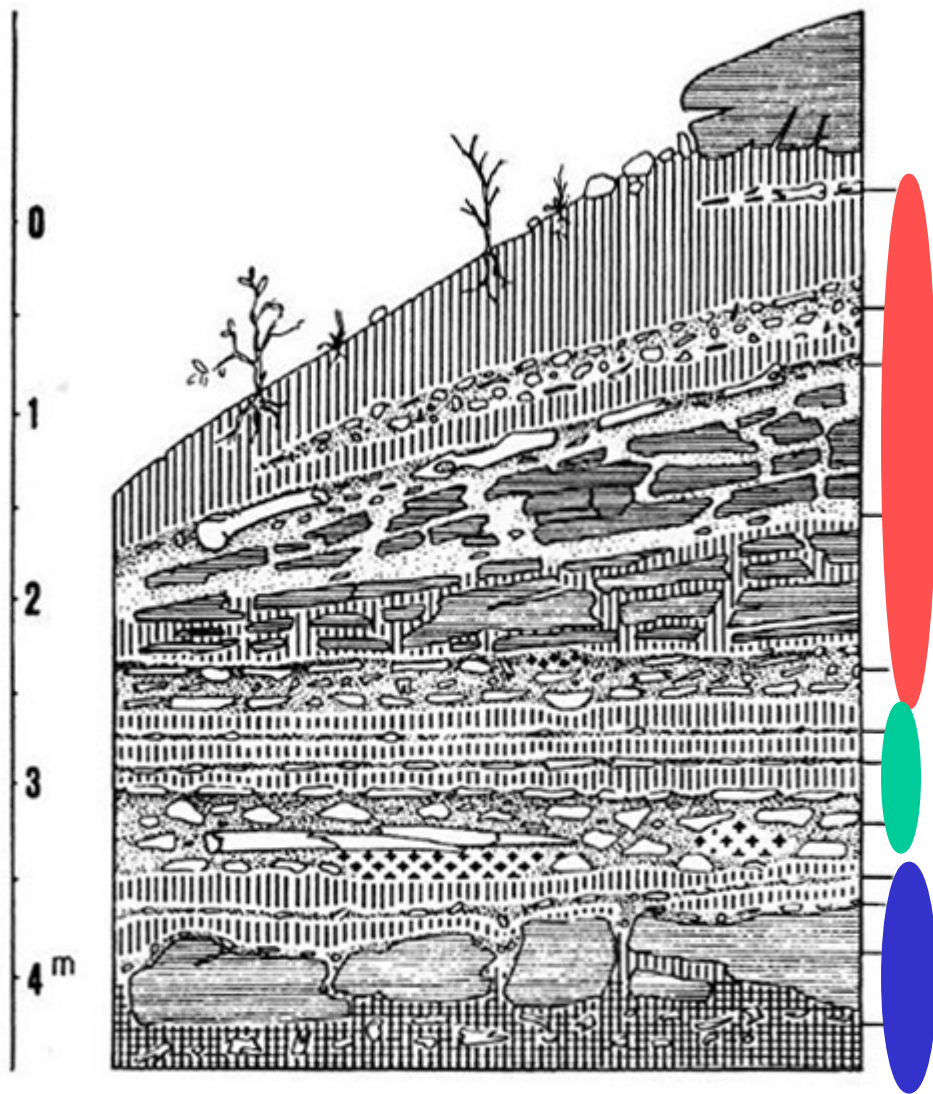
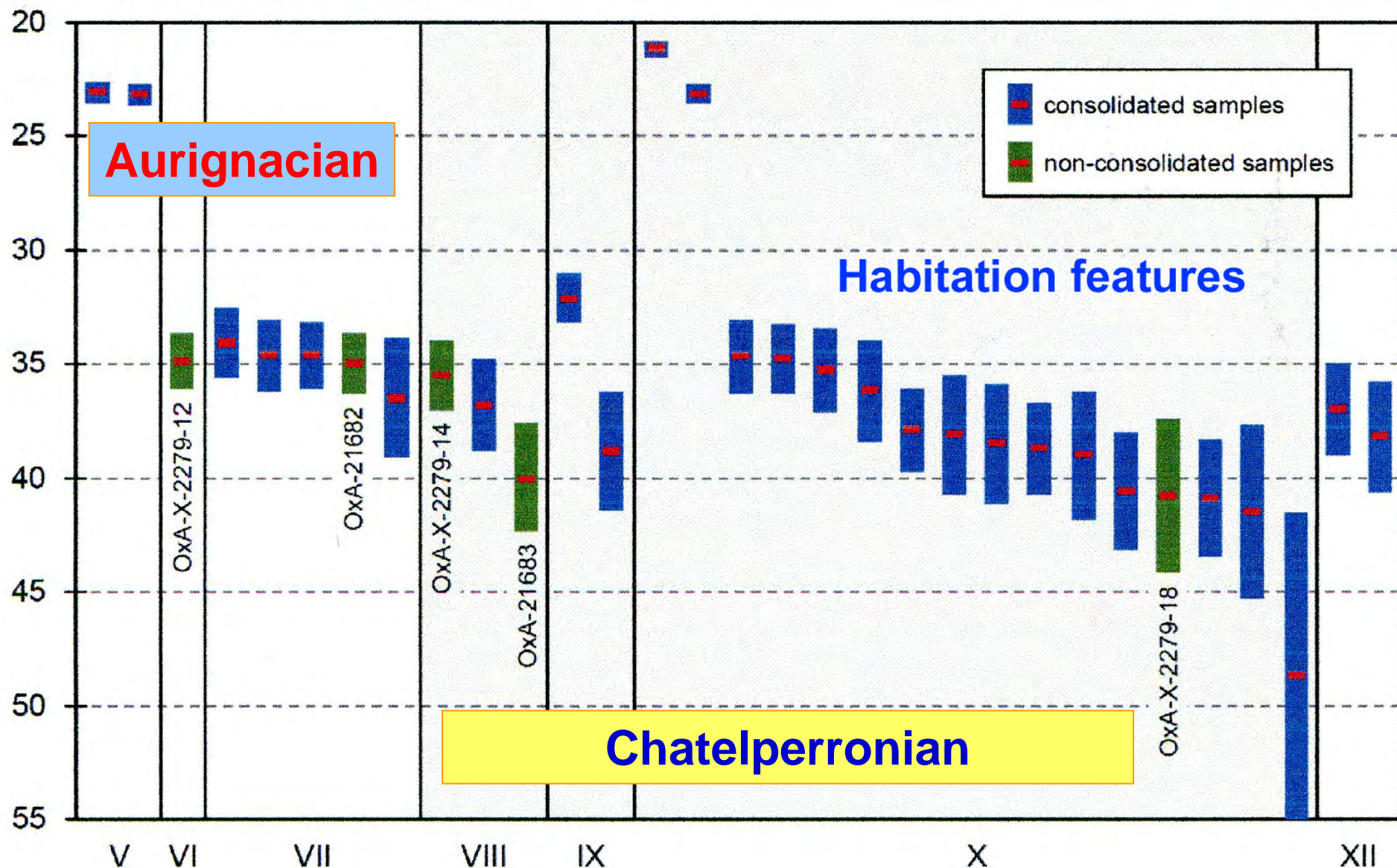


Fig. 10. Stratigraphie de la grotte du Renne à Arcy-sur-Cure (Yonne).

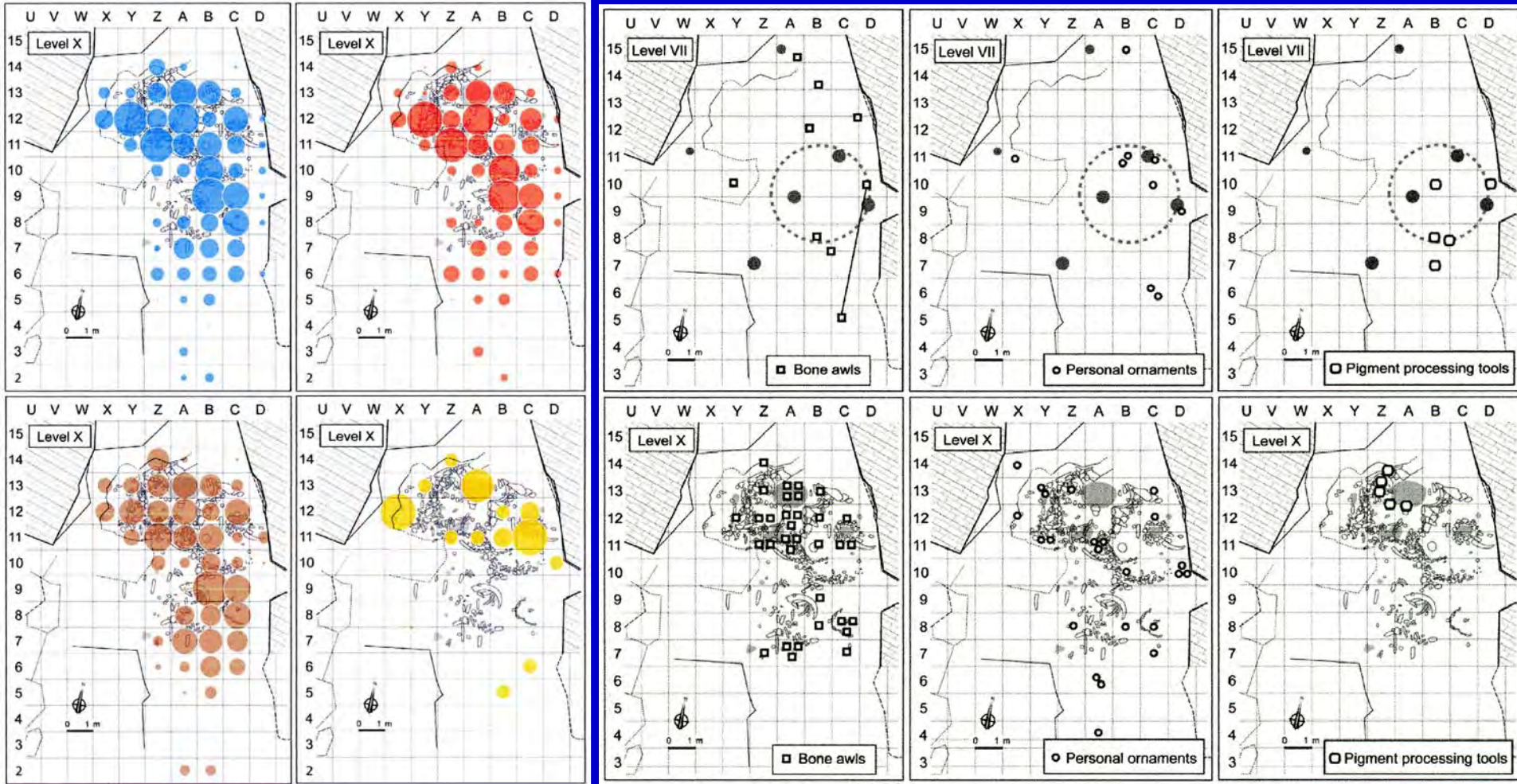
- 6. Magdalénien ancien et Aurignacien supérieur.
- 5. Sol d'ocre rouge à industrie aurignacienne.
- 4. Sol ocré et dépôt de défenses de mammoth, Châtelperronien.
- 3. Post-Moustérien et Moustérien final.

At the Grotte du Renne, near Arcy sur Cure (France), the uppermost **Mousterian** layers are followed by others characterised by the presence of **Chatelperronian** assemblages. These latter are covered by series of occupation layers attributed to the **Aurignacian**, a cultural aspect introduced by the first modern humans (*Sapiens sapiens*)

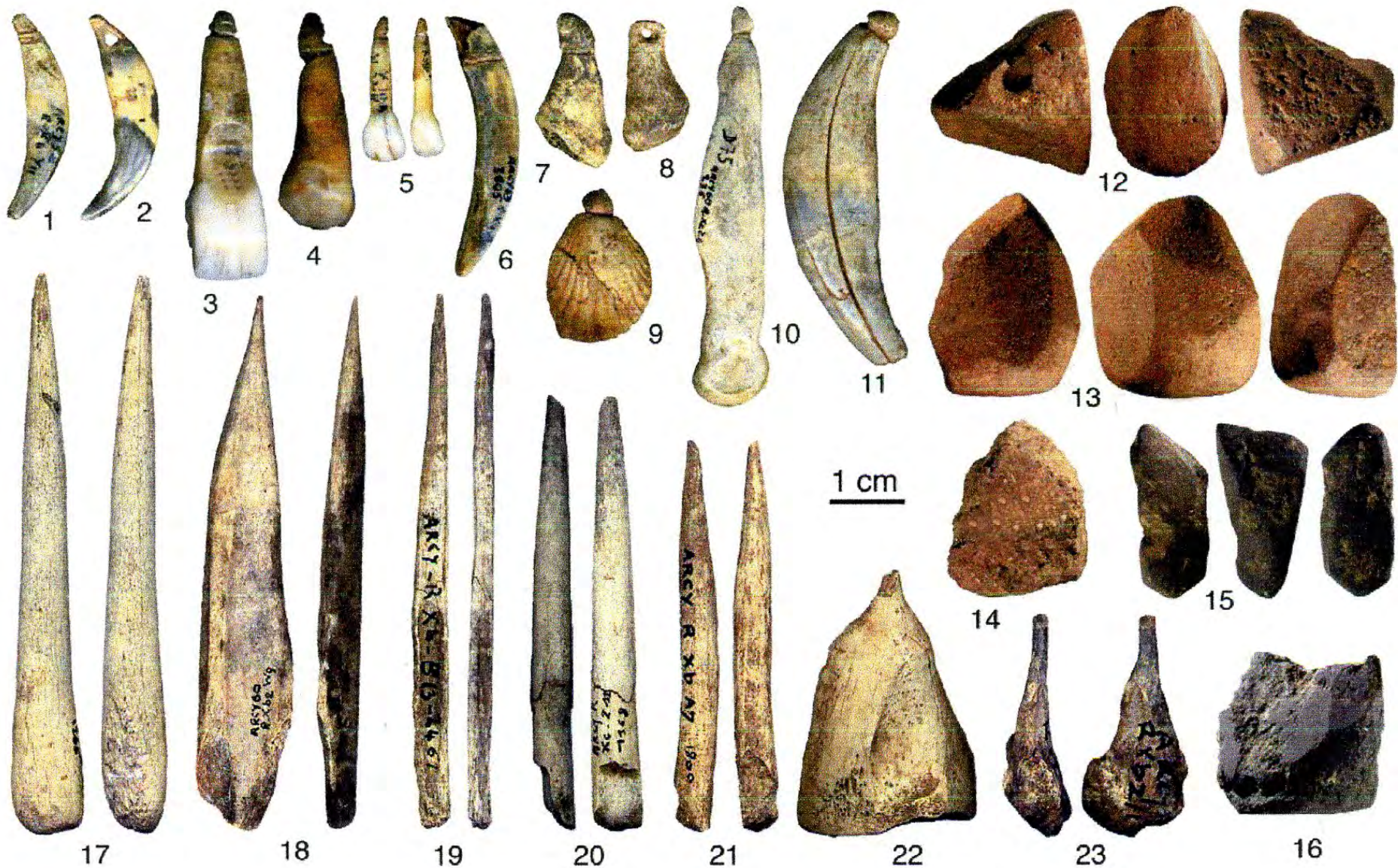
thousands of radiocarbon years BP



The radiocarbon dates from the Chatelperronian and Early Aurignacian layers of Grotte du Renne yielded a good sequence of similar results showing that the two aspects are partly contemporary from a radiometric point of view



The last Neandethals who settled at Grotte du Renne ner Arcy sur Cure in France, used different varieties of coloured pigments (left). The six maps on the right show the distribution of the bone tool types and personal, symbolic ornaments made by the last Neanderthals during the Chatelperronian times. The upper row of plans (top right) show the distribution of the same types of implements and ornaments during the Late Palaeolithic, Aurignacian period



Bone perforators, bone, tooth and shell pendants, and pigment coloured polished stones from the Chatelperronian layers of Grotte du Renne in France

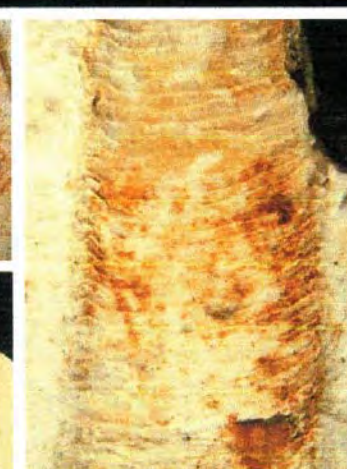


Grotte du Renne

As far as we know, Classical Neanderthals did not manufacture polished bone implements (left), which are not represented in the toolkit of these people. Bone tools started to be produced by Late Neanderthals around 35,000 years ago. They most probably represent innovation due to the income of the first bands of modern humans from the southeast



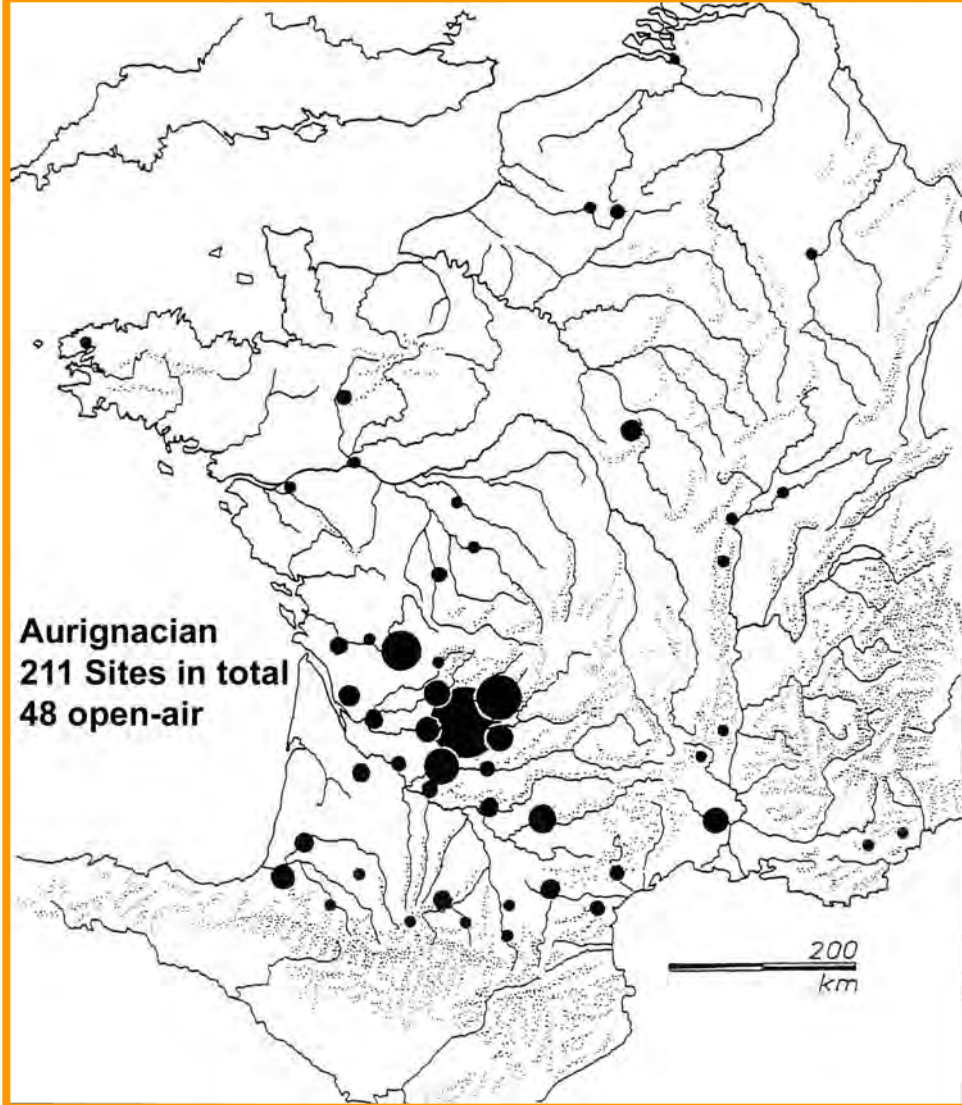
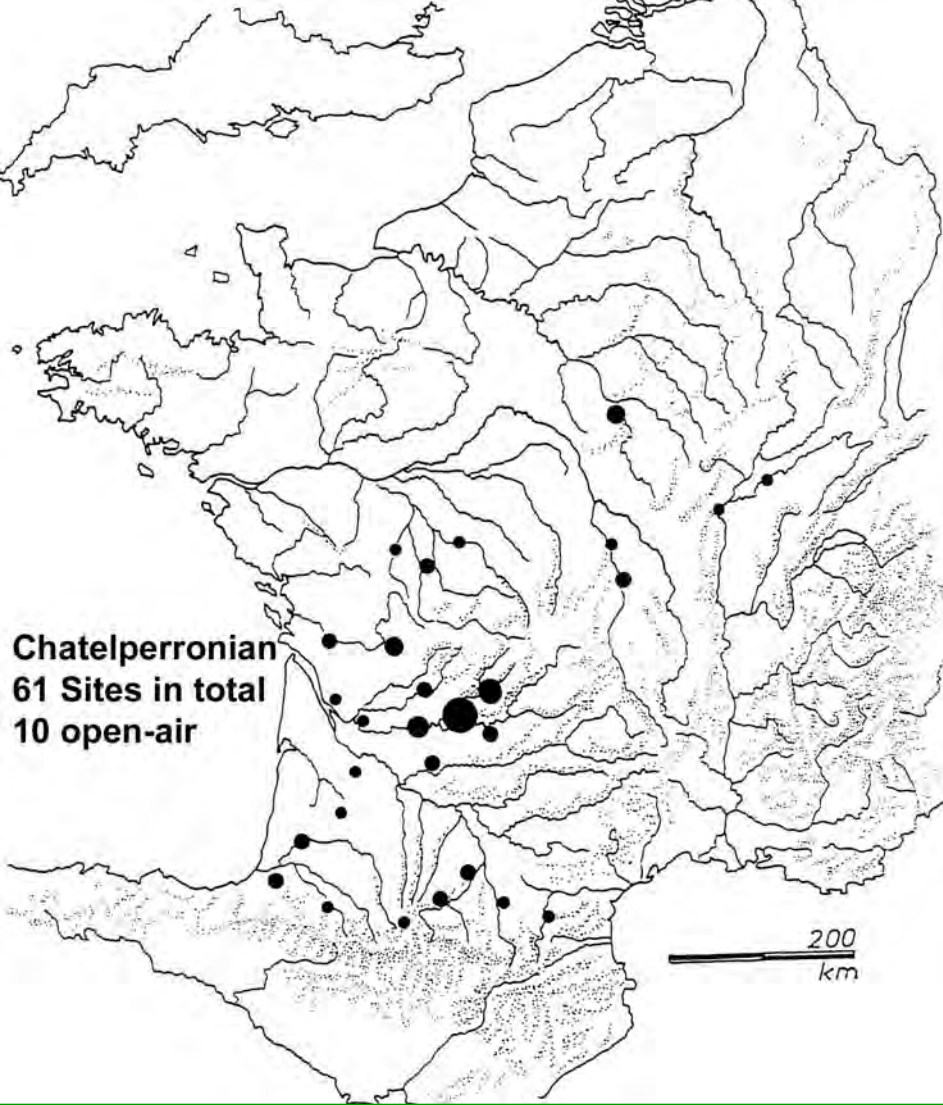
The pendants on the left come from the Chatelperronian layers of Grotte du Renne at Arcy sur Cure (France). Given their complex nature, they imply that the last Neanderthals had developed more sophisticated manufacturing techniques and used advanced types of lithic tools



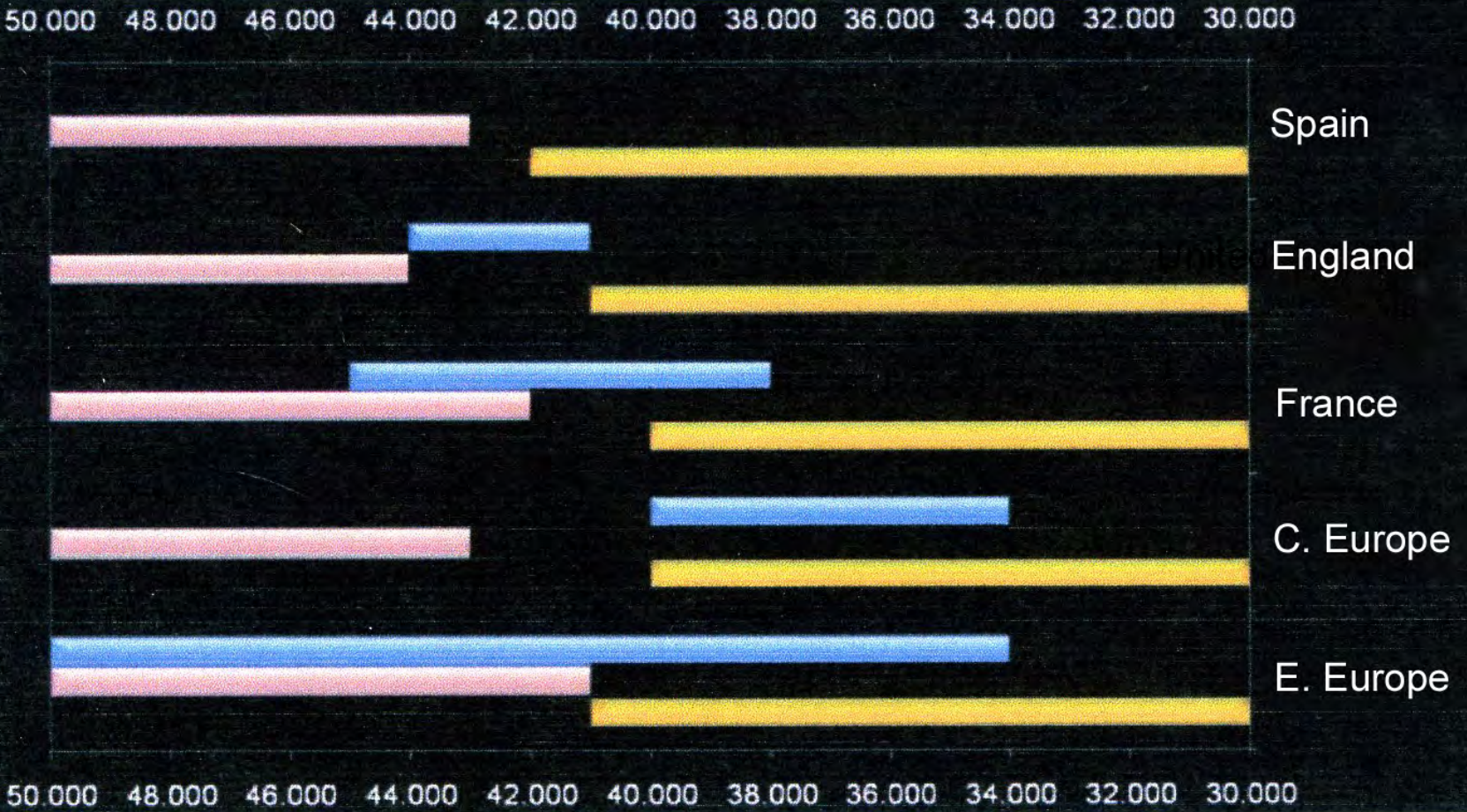
Cueva de los Aviones - Birds Cave

Cueva Antòn - Antony Cave

Also the Chatelperronian, late Neanderthal occupation layers of two other caves recently excavated in Spain (Cueva de los Aviones and Cueva Antòn) yielded a few marine shell pendants with traces of red pigments



A comparison between the distribution and number of the Chatelperronian (left) and Aurignacian sites (right) in France show that the first are ca. 1:4 of the second



ZONAS/COMPLEJOS	FIN DEL PALEOLÍTICO MEDIO	INICIO DE LA TRANSICIÓN	FIN DE LA TRANSICIÓN	INICIO DEL PALEOLÍTICO SUPERIOR
EUROPA ORIENTAL	41.000	50.000	34.000	42.000
EUROPA CENTRAL	43.000	40.000	34.000	41.000
FRANCIA	42.000	45.000	38.000	40.000
INGLATERRA	44.000	43.000	41.000	44.000
PENÍNSULA IBÉRICA	43.000			42.000

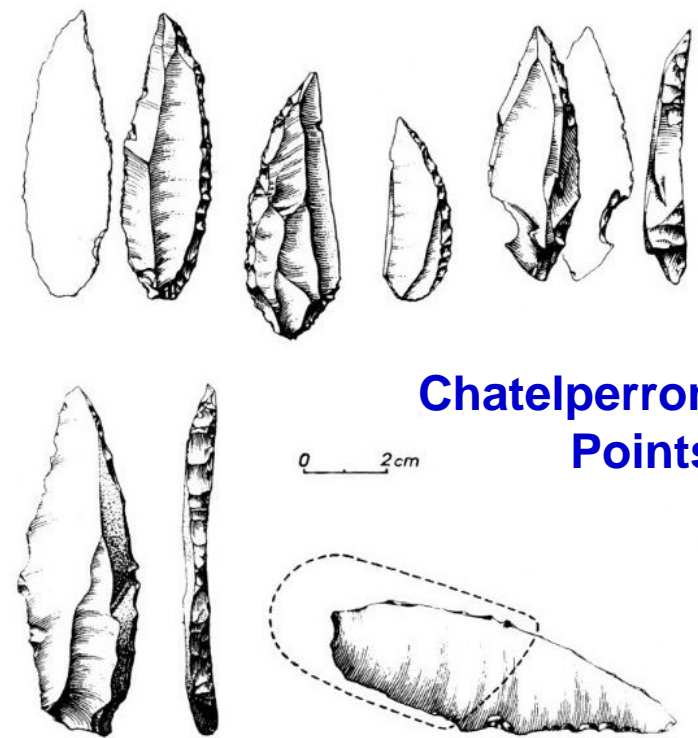
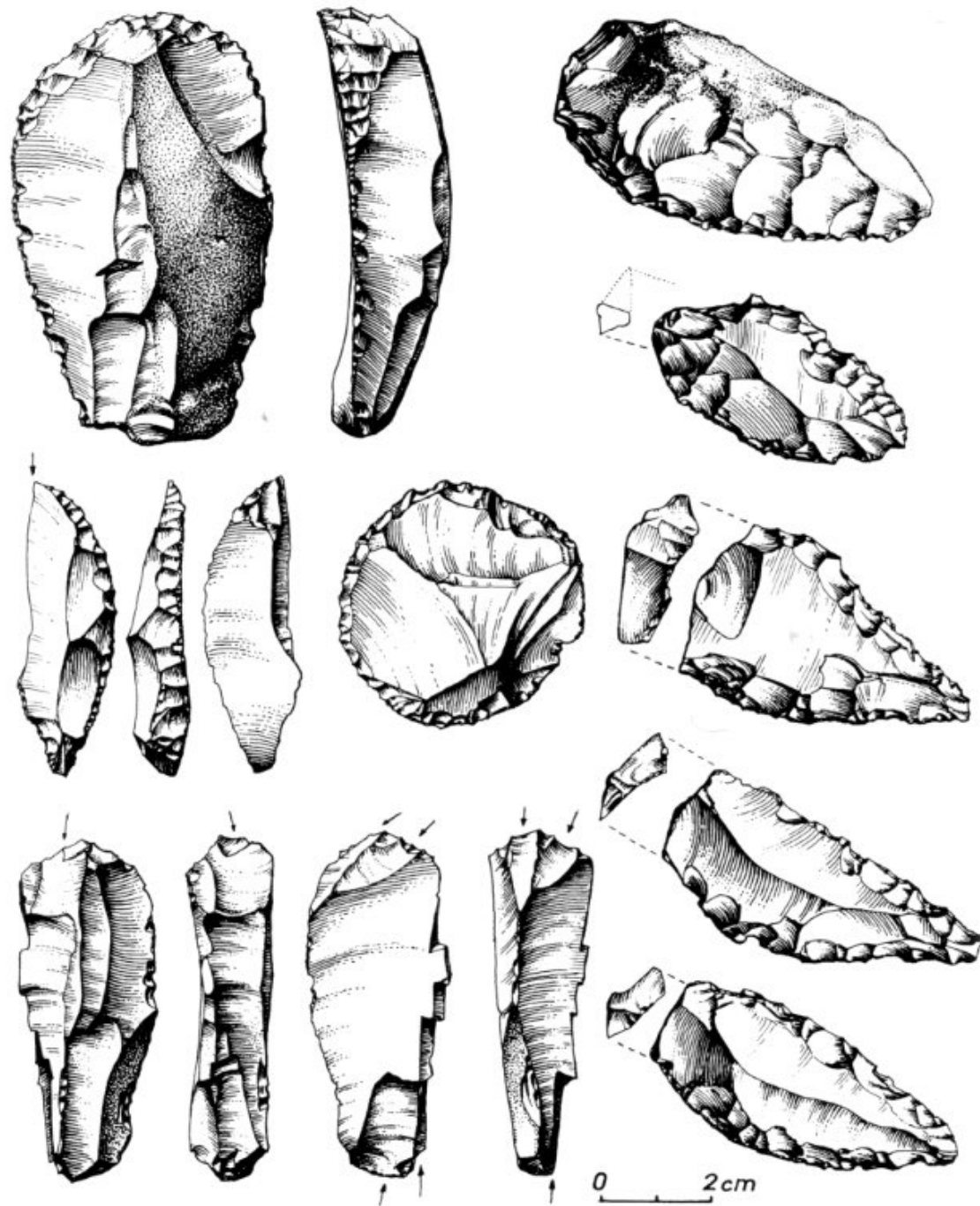
Chatelperron rock-shelter



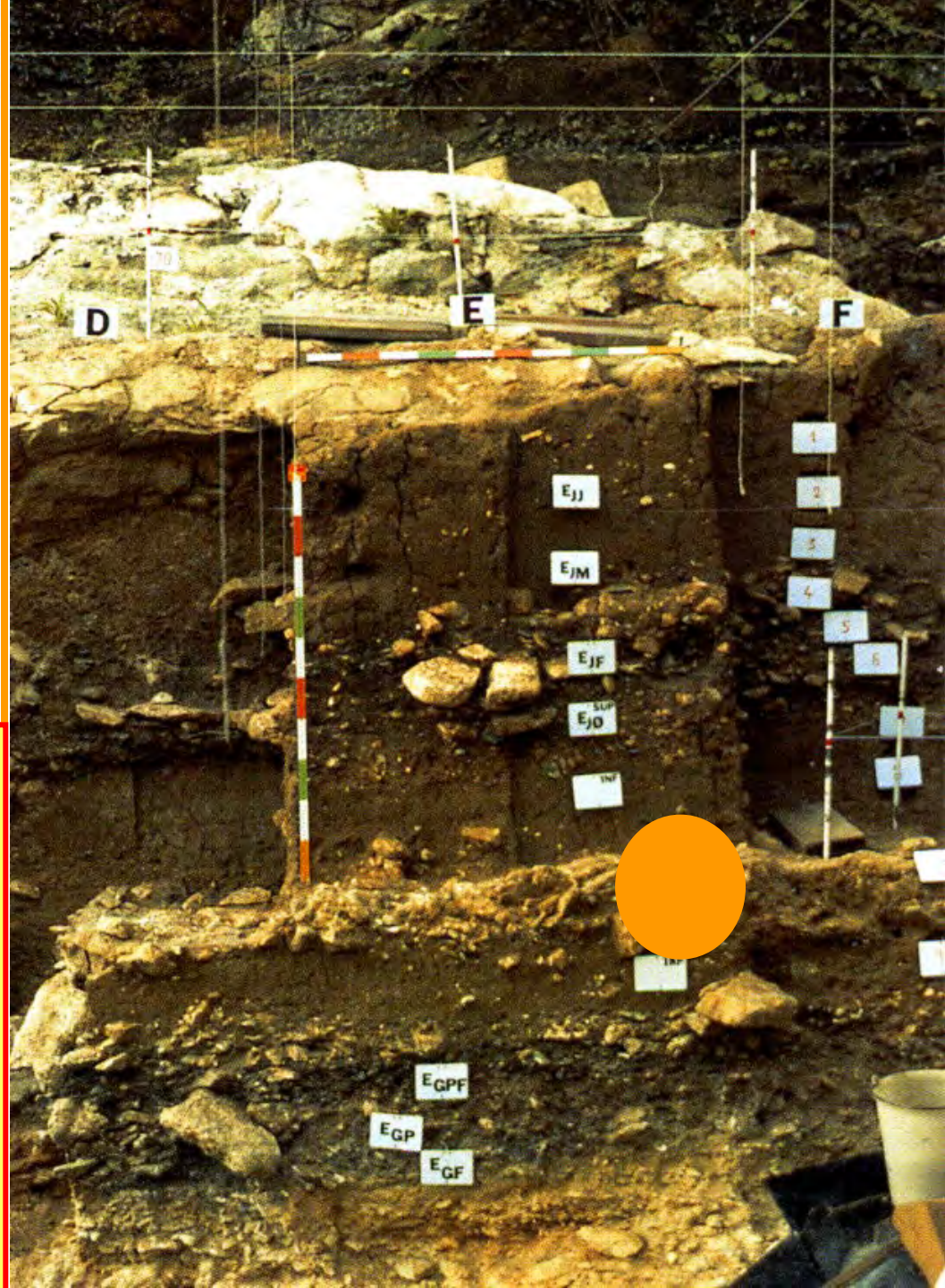
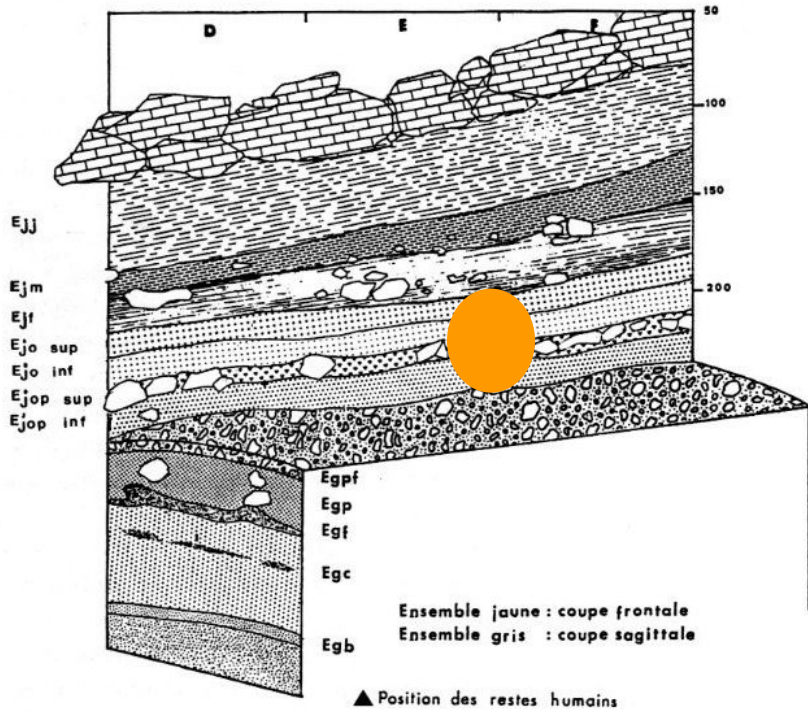
In France the chipped stone assemblages of the last Neanderthals are characterised by the occurrence of tools obtained from wide blades, and typical implements such as Chatelperron points (below)

Chatelperron points



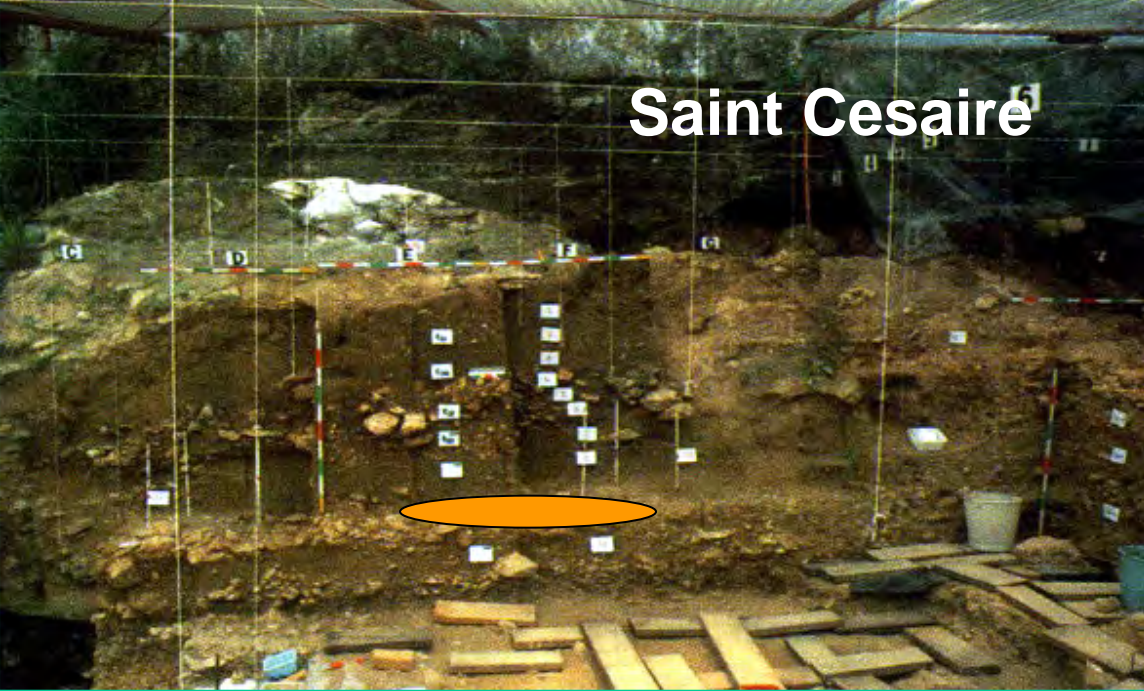


The Chatelperronian industries produced by last Neanderthals show characteristics half way between those of the Middle Palaeolithic and those of the Late Palaeolithic



The sequence excavated at the rock-shelter of Roche à Pierrot at Saint Césaire (France) with the indication of the Chatelperronian level that yielded Neanderthal bones dated to ca. 34,000

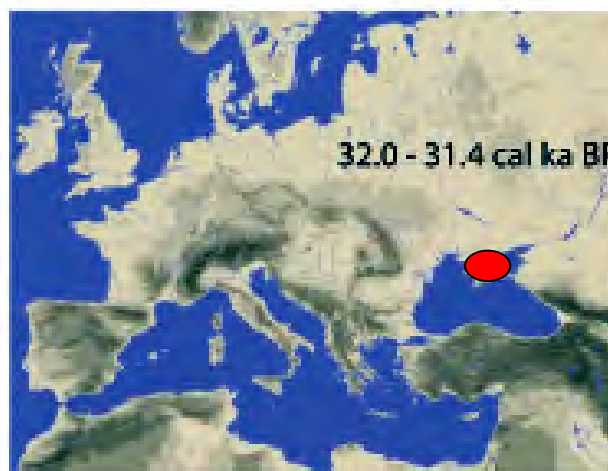
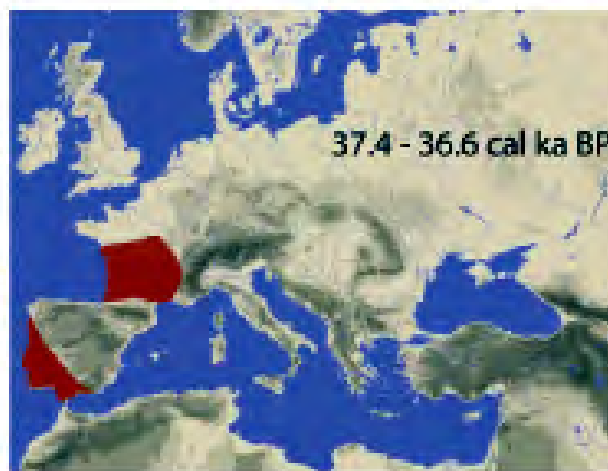
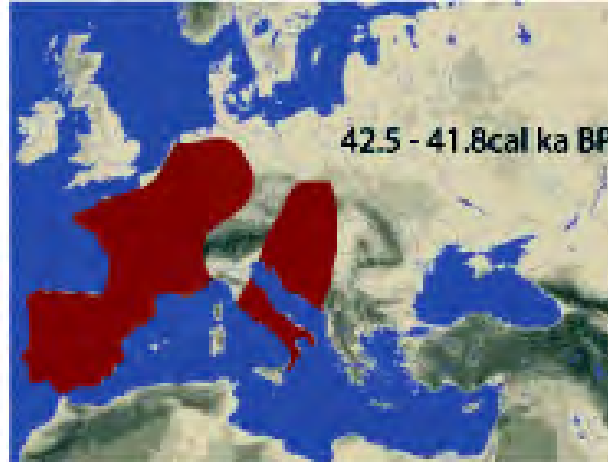
Saint Cesaire



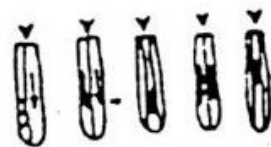
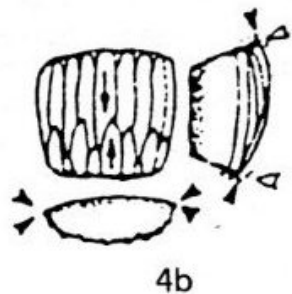
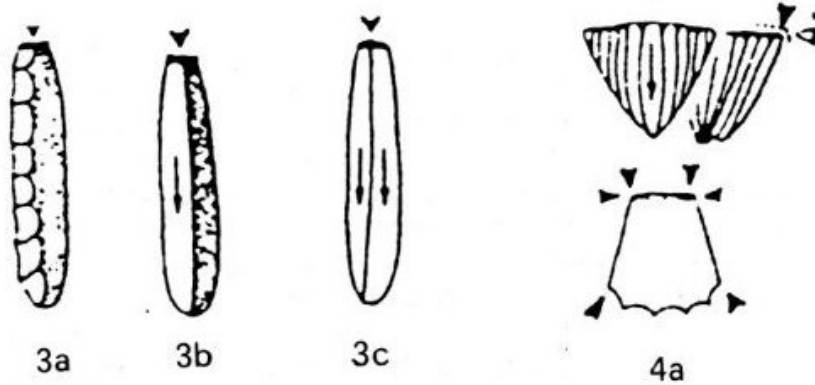
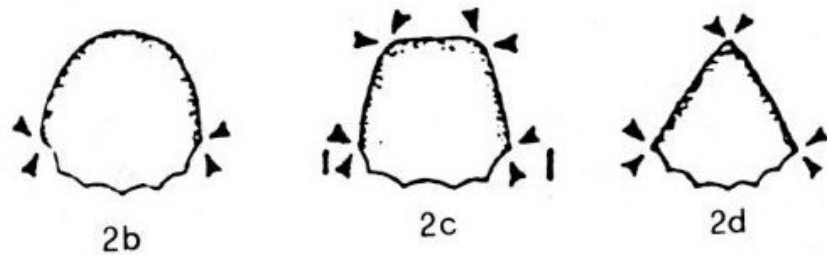
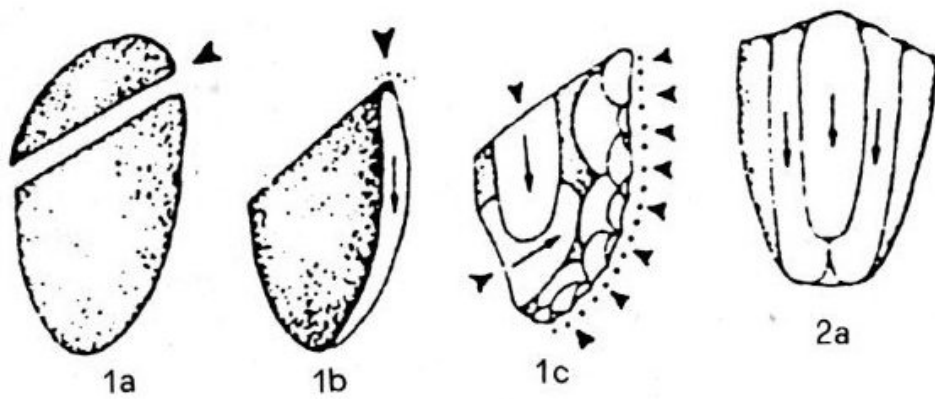
The rock-shelter of La Roche à Pierrot at Saint Césaire (Charente, France) that played a very important role in the study of the Middle-to-Late Palaeolithic period in western Europe. The Chaterperronian layers from this site yielded bones of one single individual, which allowed to attribute the cultural remains of this aspect to Neanderthal human beings



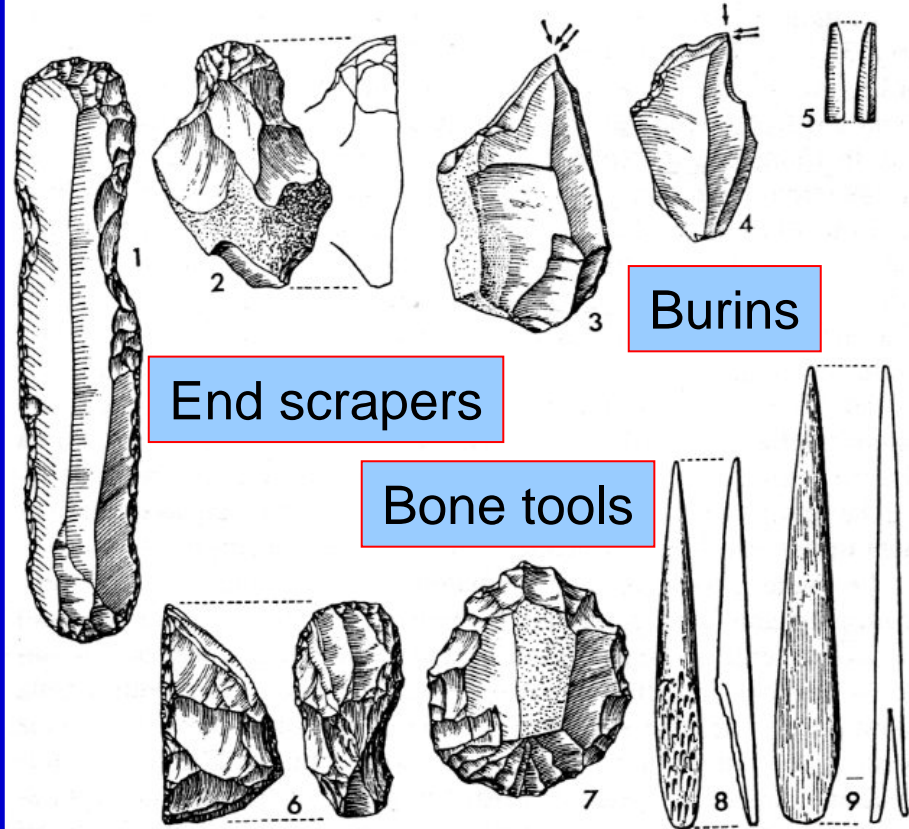
The bones of one single Neanderthal individual, among which are the remains of an incomplete skull (left), were found in a circular area ca. 70 in diameter inside the Chatelperronian horizon. Both archaeologists and anthropologist believe that they belong to one individual buried in the shelter



The six maps show the decreasing extension of the territories settled by Neanderthal groups in western Europe from some 45,000 to 35,000 years BP (from top left to bottom left). The last map (bottom right) shows that slightly before 30,000 BP Neanderthals were extinguished from the region, except for part of Crimea



Dufour bladelets
making technique



Burins

End scrapers

Bone tools

The first modern humans introduced a totally different culture called Aurignacian, characterised by new tools among which are Burins, End scrapers, Dufour blades and polished bones

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Bar-Yosef, O. and Zilhão, J. (eds.) 2006 – *Towards a Definition of the Aurignacian. Proceedings of the Symposium held in Lisbon, Portugal, June 25-30, 2002*. Trabalhos de Arqueologia 45. Lisboa