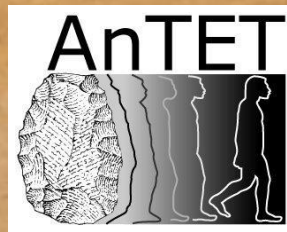


Far from the Near East? A View of the Lower to Middle Palaeolithic Boundary from the Northern France and North-Western Europe

David Hérison

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Maison de l'Archéologie et de l'Ethnologie
Université Paris X Nanterre*



**The Lower to Middle Paleolithic Boundary:
a view from the Near East University of
Haifa – 5-10 November 2017**

A collective and interdisciplinary approach

UNIVERSITÉ LILLE 1 - SCIENCES ET TECHNOLOGIES

ECOLE DOCTORALE SHS

THÈSE

Pour obtenir le grade de

DOCTEUR DE L'UNIVERSITÉ LILLE I

Discipline : Préhistoire

Présentée et soutenue publiquement par

David HÉRISSON

ÉTUDE DES COMPORTEMENTS DES PREMIERS NÉANDERTALIENS DU NORD DE LA FRANCE
Les occupations saaliennes des gisements de Biache-Saint-Vaast et de Therdonne

Directeur de thèse : Professeur Alain TUFFREAU

Soutenue le 13 décembre 2012

Après avis de :

MONNIER Jean-Laurent, Directeur de recherche au CNRS, HDR, UMR 6566 de Rennes 1
ROEBROEKS Wil, Professeur à la Faculty of Archaeology, Universiteit Leiden

Rapporteur
Rapporteur

Devant la commission d'examen composée de :

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TUFFREAU Alain, Professeur à l'Université Lille 1

Examinateur
Examinateur
Examinateur
Rapporteur
Rapporteur
Directeur

PhD thesis 2012

UNE OCCUPATION DE LA PHASE ANCIENNE DU PALÉOLITHIQUE MOYEN À THERDONNE (OISE)

Chronostratigraphie, production de pointes Levallois et réduction des nucléus

Jean-Luc LOCHT¹, Pierre ANTOINE², David HÉRISSON³, Guillaume GADEBOIS⁴
et Nick DEBENHAM⁵

Locht *et al.*, 2010 *Gallia Préhistoire*

*Le niveau N3 de Therdonne :
reflet de la diversité des technocomplexes
du Paléolithique moyen ancien
du Nord de la France ?*

David HÉRISSON
et Jean-Luc LOCHT

XXVII^e congrès préhistorique de France – Bordeaux-Les Eyzies, 31 mai-5 juin 2010

Hérisson & Locht, 2014 *CPF*

Quaternary International 409 (2016) 73–91



ELSEVIER

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journal homepage: www.elsevier.com/locate/quaint



A new key-site for the end of Lower Palaeolithic and the onset of Middle Palaeolithic at Etricourt-Manancourt (Somme, France)



David Hérisson ^{a, b, *}, Sylvie Coutard ^{c, e}, Emilie Goval ^{d, b}, Jean-Luc Locht ^{c, e},
Pierre Antoine ^e, Yoann Chantreau ^{a, f}, Nick Debenham ^g

Hérisson *et al.*, 2016 *Quaternary International*

A collective and interdisciplinary approach



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Quaternary International 411 (2016) 129–148

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Timescales, space and culture during the Middle Palaeolithic in northwestern France



Jean-Luc Locht ^{a,*}, David Hérissou ^b, Emilie Goval ^c, Dominique Cliquet ^d, Briagell Huet ^e, Sylvie Coutard ^a, Pierre Antoine ^f, Philippe Feray ^g

Locht *et al.*, 2016 *Quaternary International*

Article original
Néandertal et le feu au Paléolithique moyen ancien. Tour d'horizon des traces de son utilisation dans le Nord de la France

Neanderthal and fire during Early Middle Palaeolithic. Overview of its use traces in Northern France

David Hérissou ^{a,*}, Jean-Luc Locht ^b, Patrick Auguste ^c, Alain Tuffreau ^d

Hérissou *et al.*, 2013 *L'Anthropologie*

Quaternary International 411 (2016) 233–283

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The emergence of the Middle Palaeolithic in north-western Europe and its southern fringes



David Hérissou ^{a,*}, Michel Brenet ^{b,c}, Dominique Cliquet ^{d,e}, Marie-Hélène Moncel ^a, Jürgen Richter ^f, Beccy Scott ^g, Ann Van Baelen ^h, Kévin Di Modica ⁱ, Dimitri De Loecker ^j, Nick Ashton ^g, Laurence Bourguignon ^k, Anne Delagnes ^{l,m}, Jean-Philippe Faivre ⁿ, Milagros Folgado-Lopez ^{o,p}, Jean-Luc Locht ^q, Matt Pope ^r, Jean-Paul Raynal ^s, Wil Roebroeks ^j, Carmen Santagata ^t, Alain Turq ^u, Philip Van Peer ^v

Hérissou *et al.*, 2016 *Quaternary International*

3 *Éléments de réflexion sur la place et le rôle de la France septentrionale en Europe du Nord-Ouest durant la phase ancienne du Paléolithique moyen*

David HÉRISOU,
Émilie GOVAL
et Bertrand LEFÈVRE

Mémoire 59 de la Société préhistorique française

Hérissou *et al.*, 2016 *MSPF*

From Northern France to North-Western Europe



From Northern France to North-Western Europe



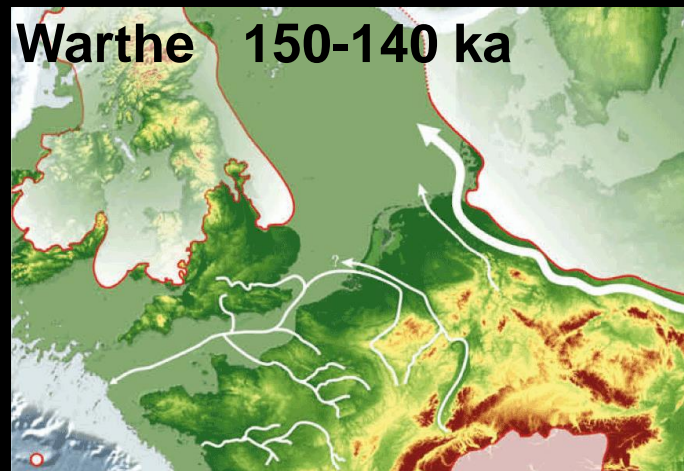
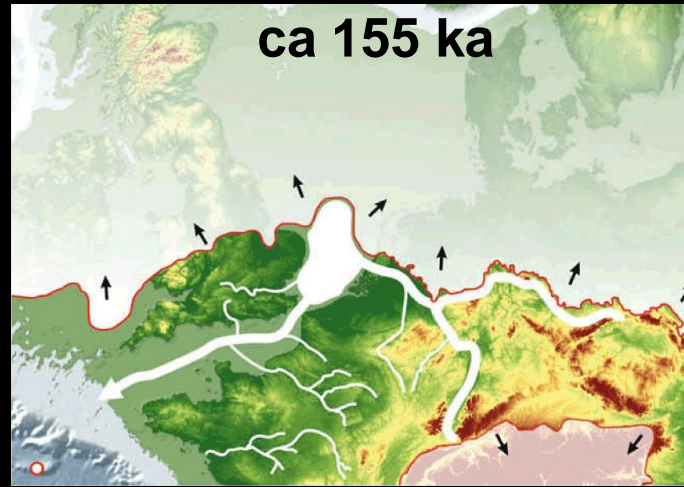
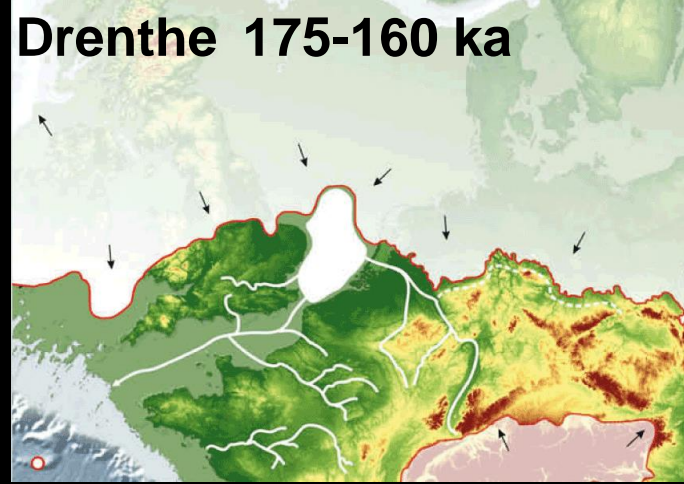
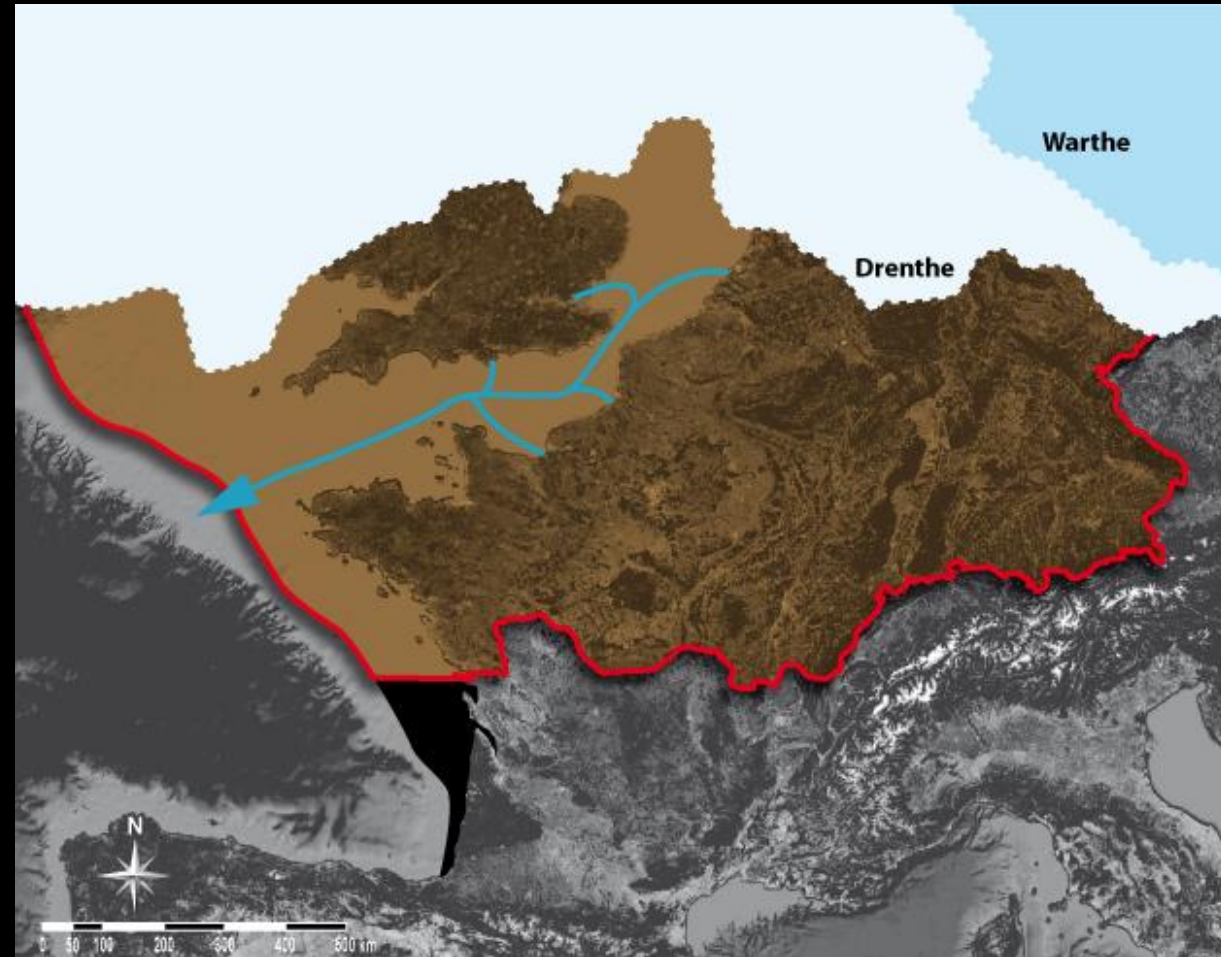
From Northern France to North-Western Europe



From Northern France to North-Western Europe

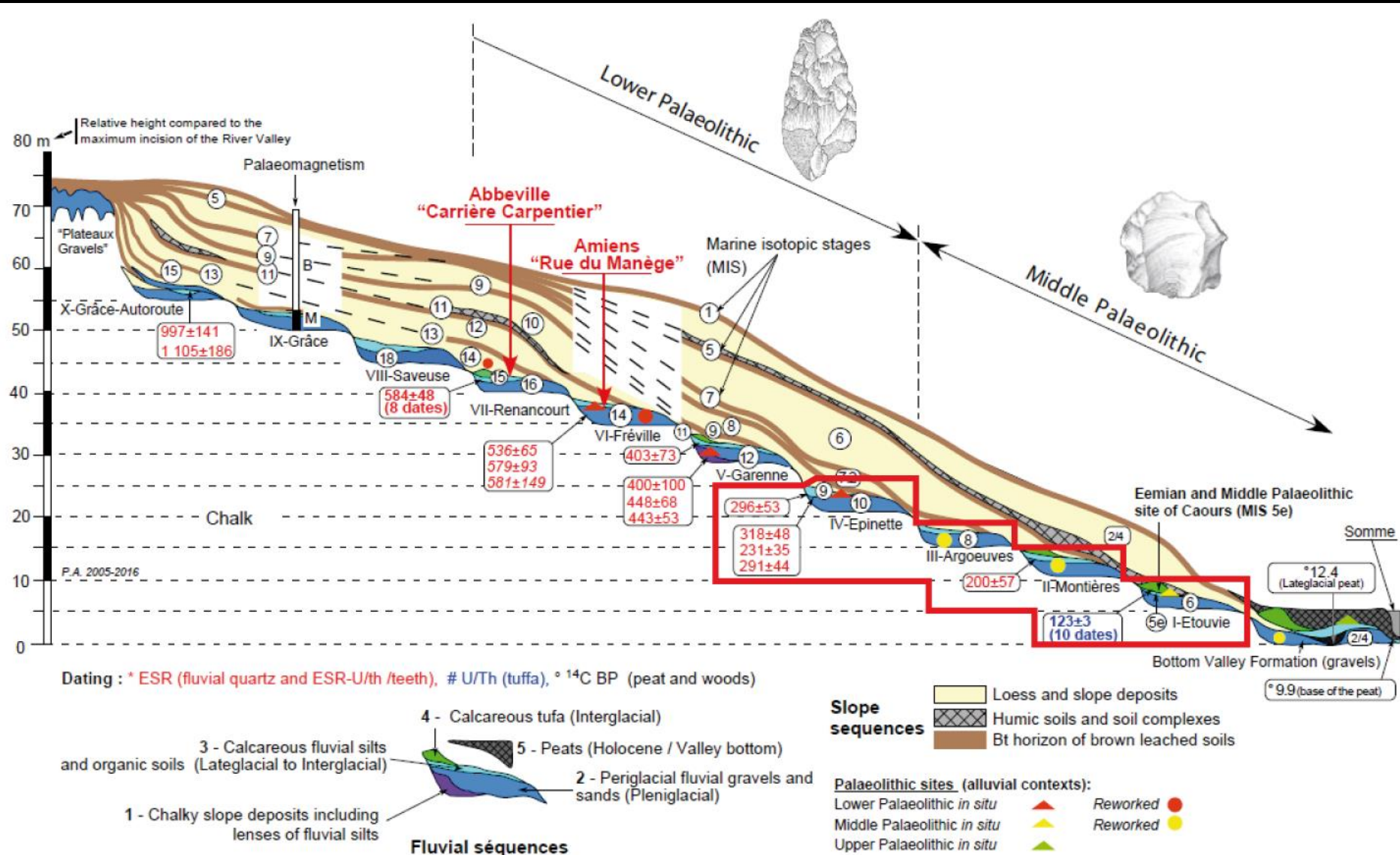


From Northern France to North-Western Europe

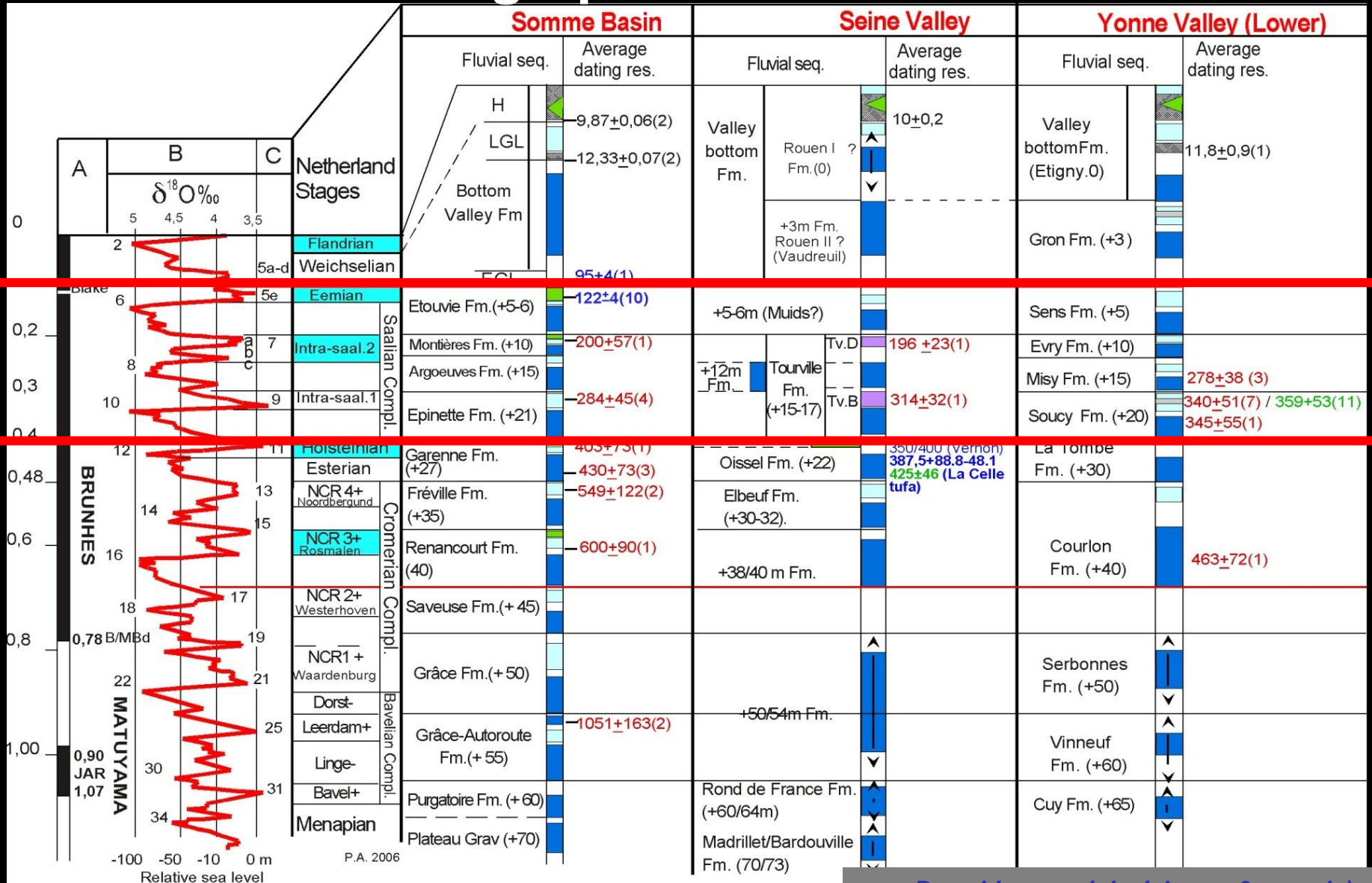


The chronostratigraphic framework: a reference

Fluviatile context



The chronostratigraphic framework: a reference



A, B, C, According to B.M. Funnell, 1995

- Peat
- Calcareous tufa
- Fluvial silts / sandy silts
- Periglacial fluvial gravels
- Estuarine silts
- Incipient valley soil

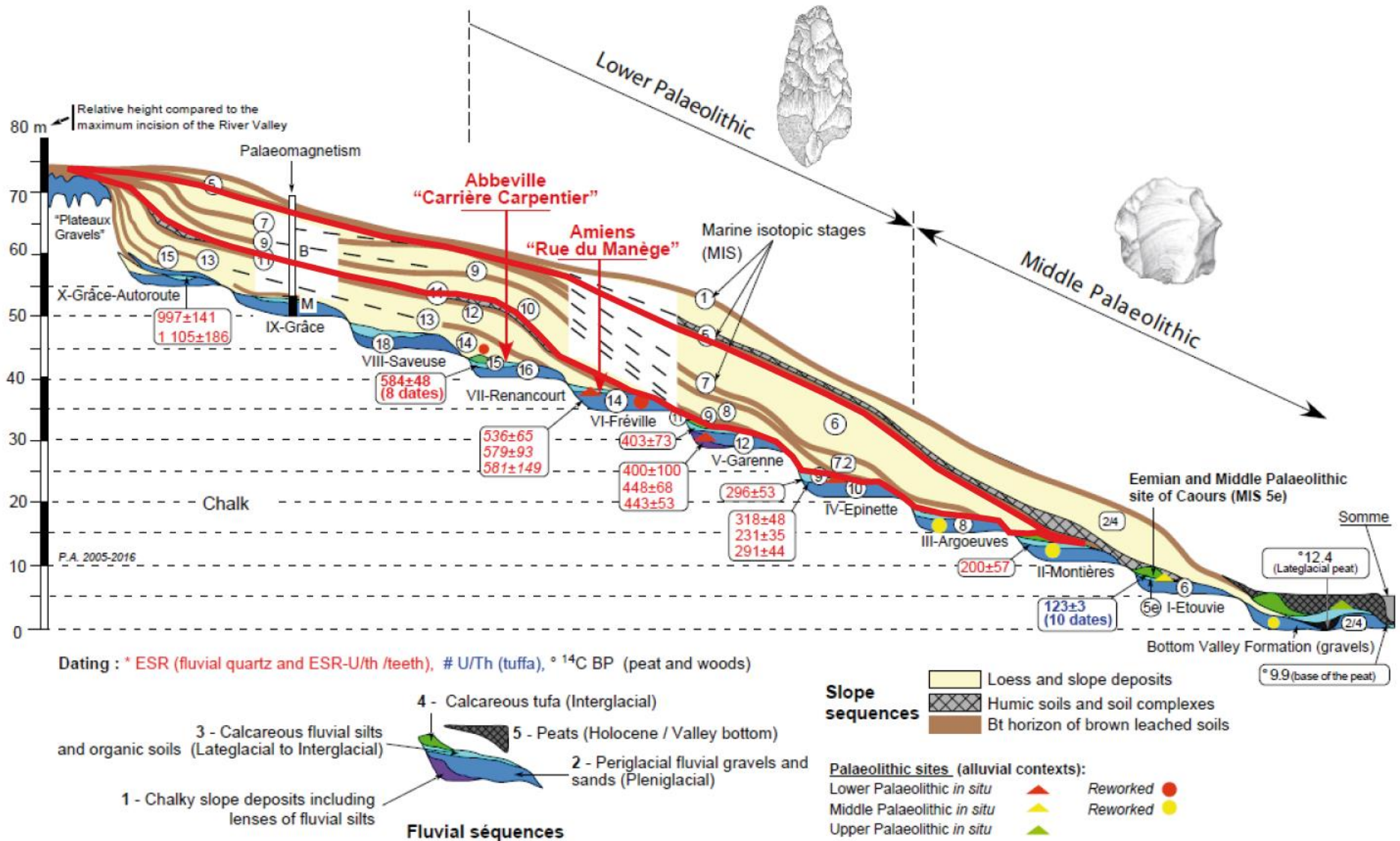
Deep blue : periglacial sands & gravels
Light blue : calcareous « interglacial » silts
Green : tufa : climatic optimum

Dating: **ESR, U/Th, combined U/Th-ESR, ¹⁴C** (2) : number of dates

Antoine et al., 2007 QSR

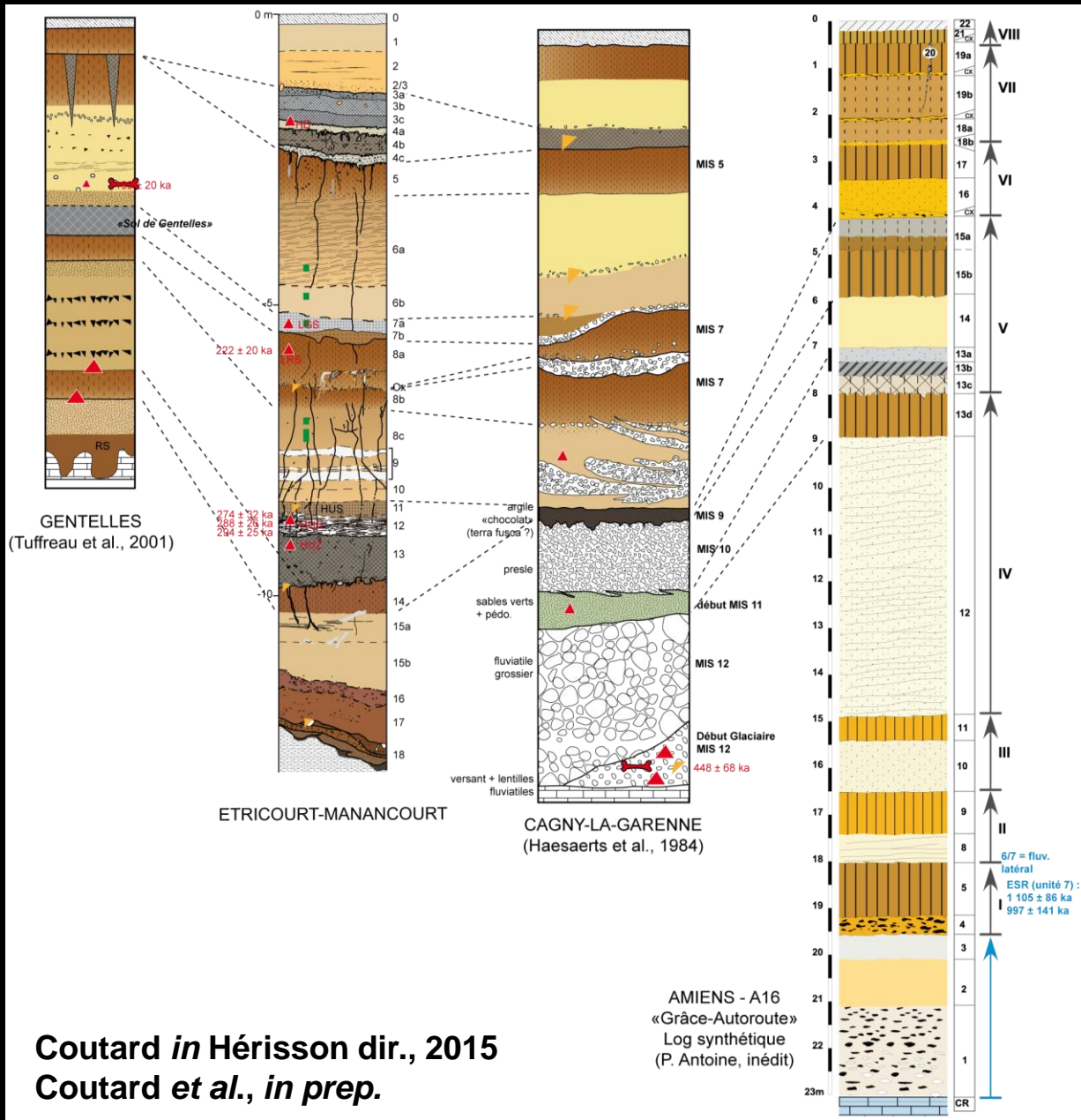
The chronostratigraphic framework: a reference

Loessic context



The chronostratigraphic framework: a reference

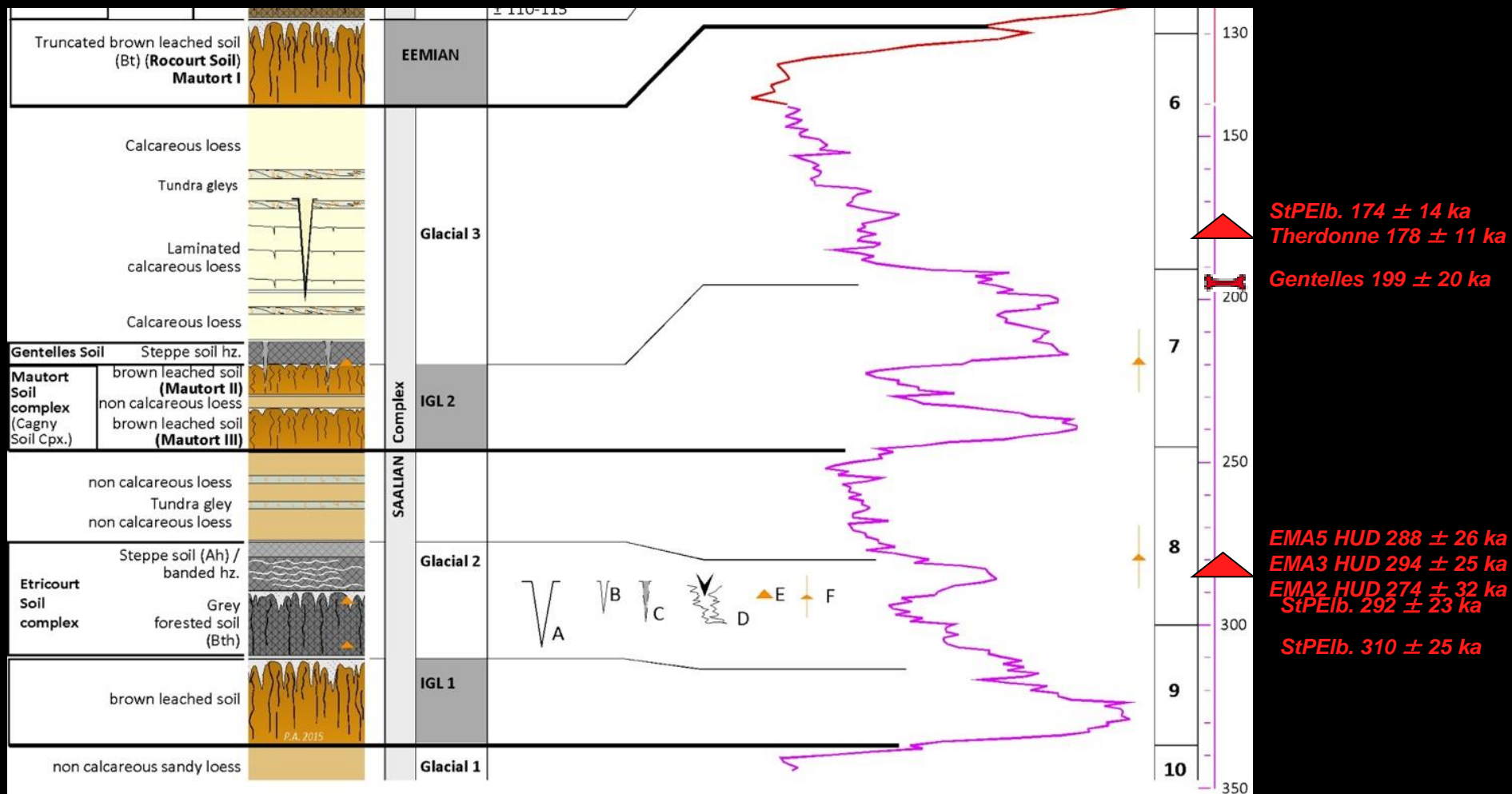
Loessic context



Coutard *in* Hérisson dir., 2015
Coutard *et al.*, *in prep.*

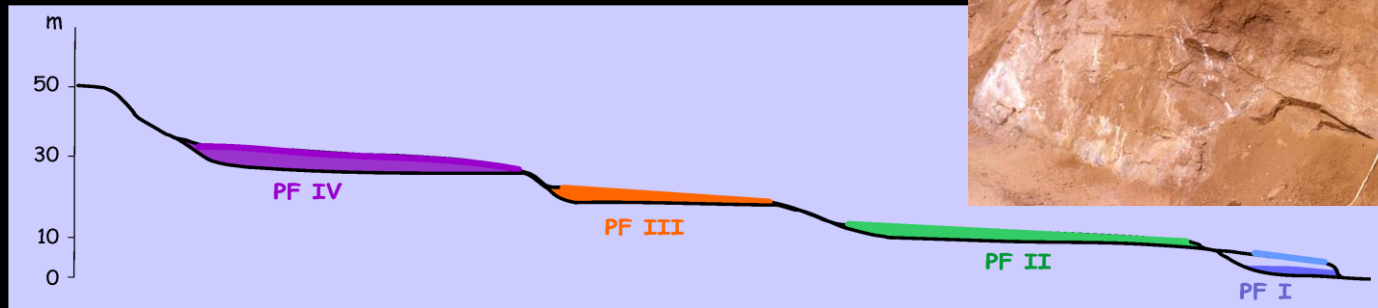
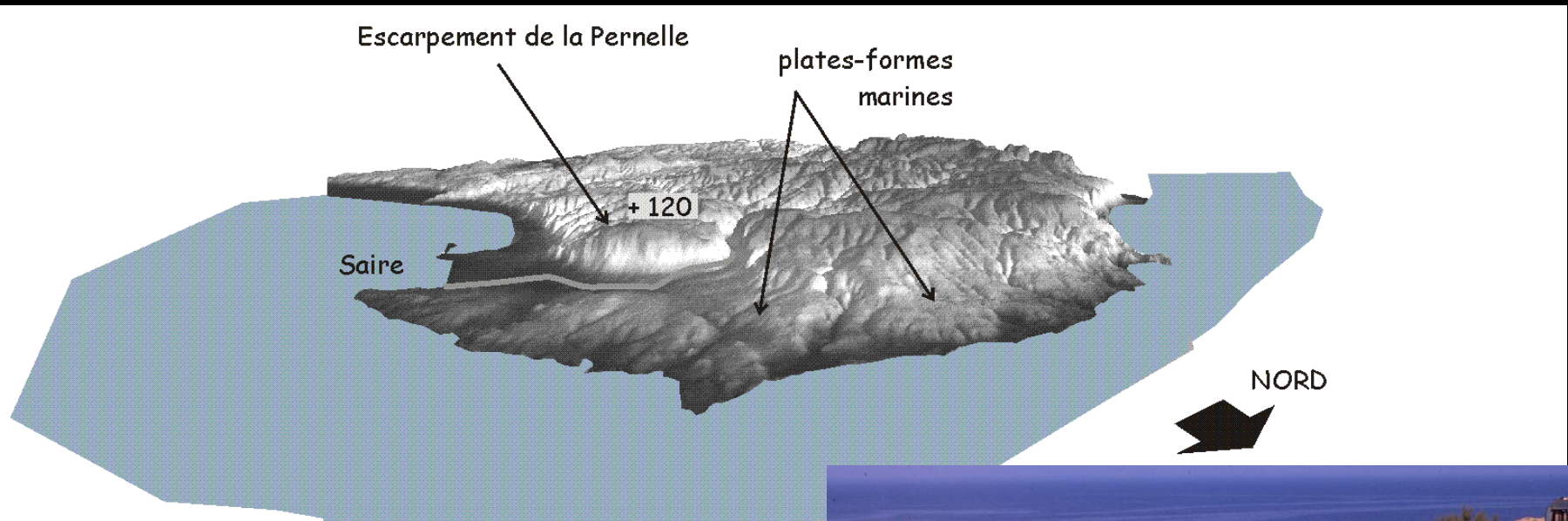
The chronostratigraphic framework: a reference

Loessic context

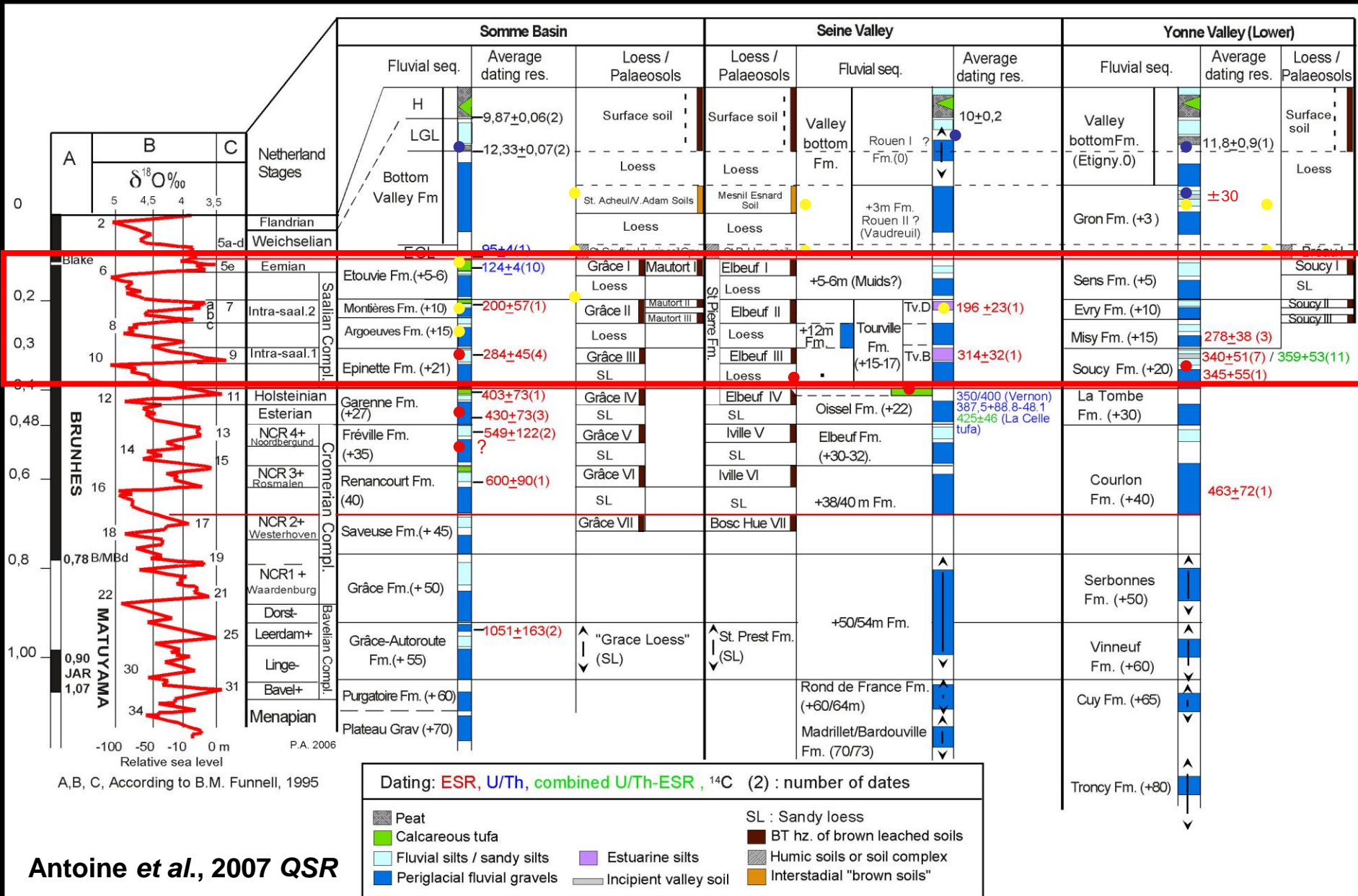


The chronostratigraphic framework: a reference

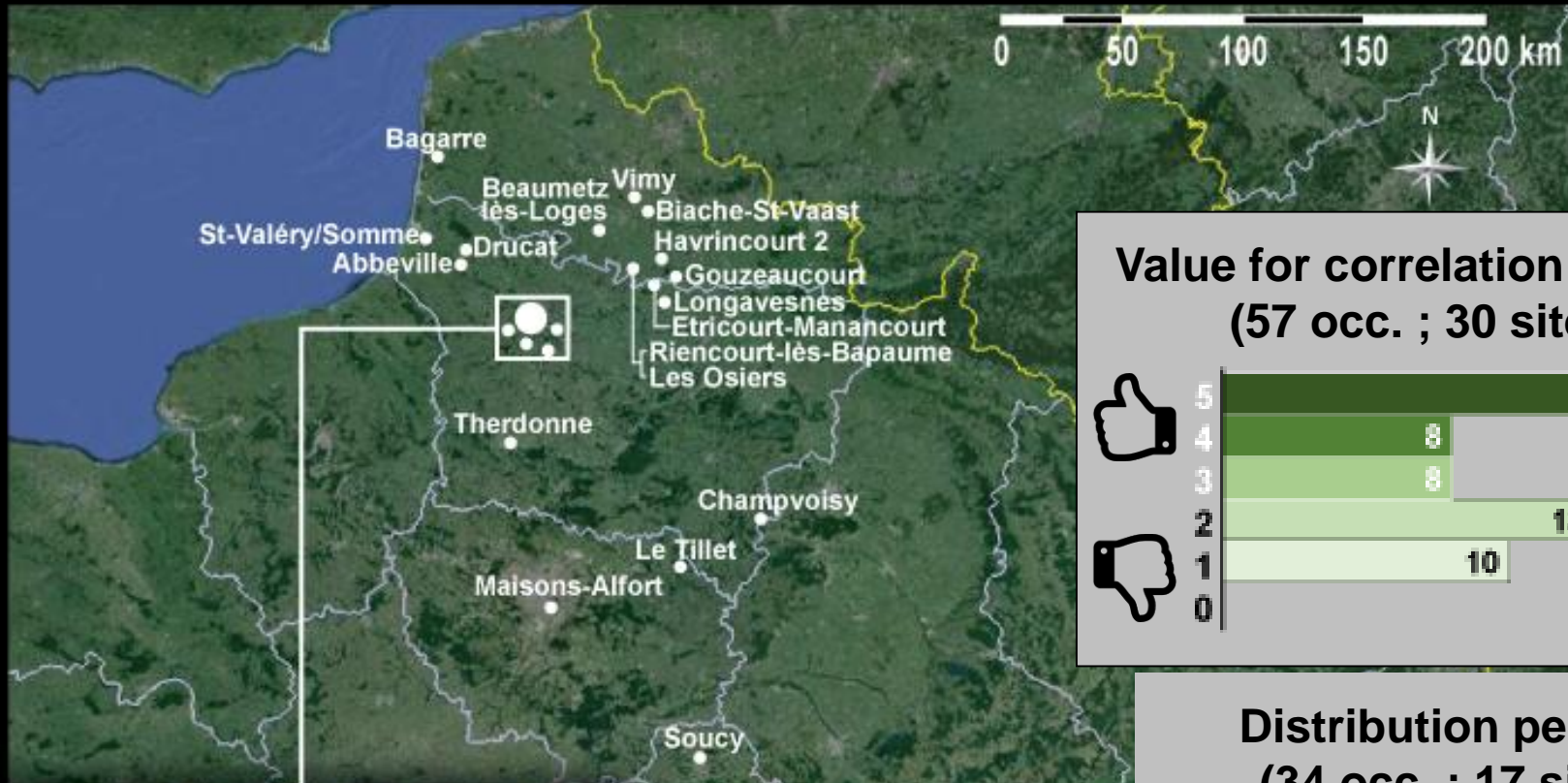
Marine Platform context



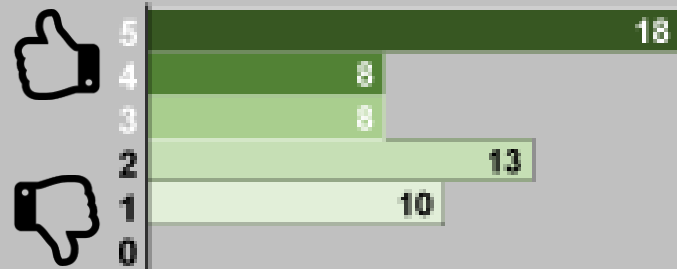
The chronostratigraphic framework: a reference thanks to a double system control



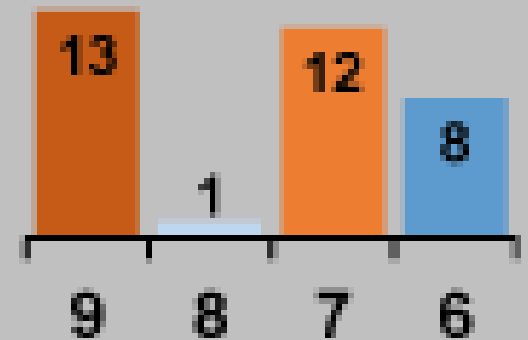
A rich dataset: mainly reliable...



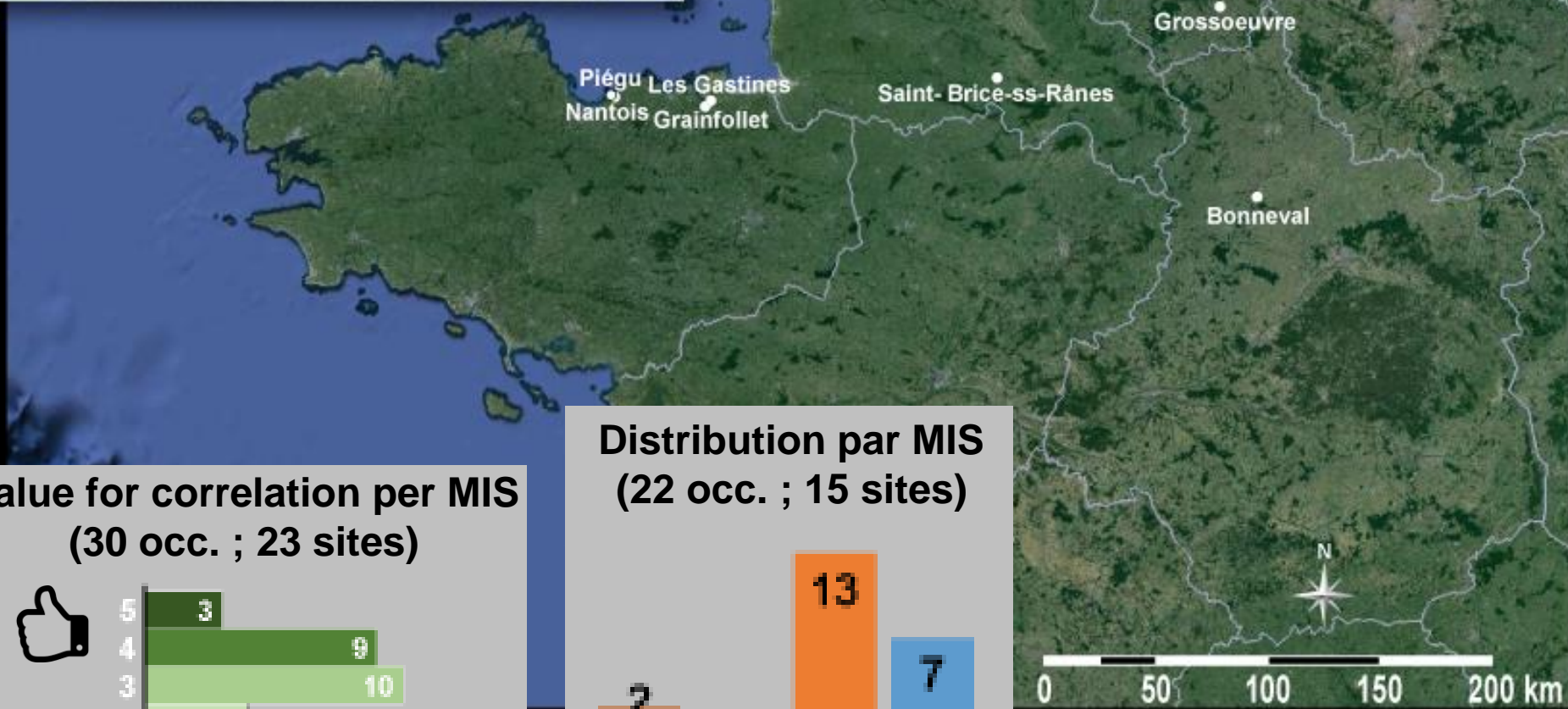
Value for correlation per MIS (57 occ. ; 30 sites)



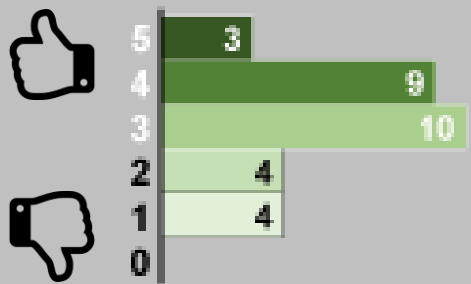
Distribution per MIS (34 occ. ; 17 sites)



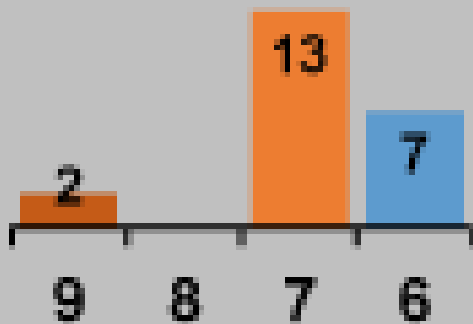
A rich dataset: mainly reliable...



Value for correlation per MIS (30 occ. ; 23 sites)

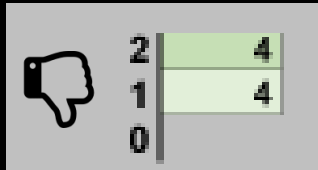


Distribution par MIS (22 occ. ; 15 sites)



... but

North-Western France



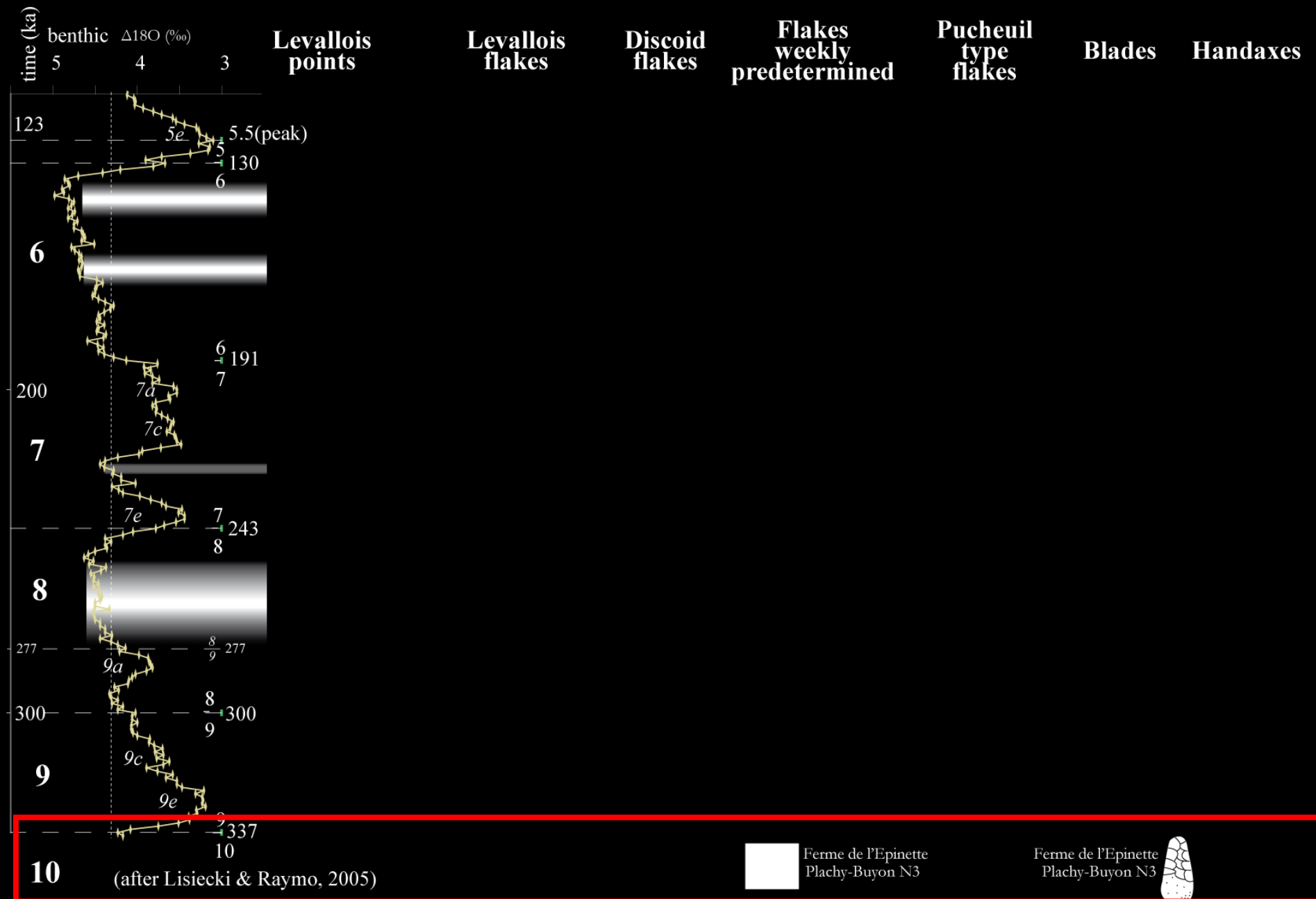
Site	Level/Layer	MIS	Value of MIS correlation (x/5)
<i>Bonneval</i>	<i>N5</i>	9	2
<i>Digulleville</i>	<i>Plage « supérieure »</i>	7/6 ?	2
<i>Saint-Brice-sous-Rânes</i>	<i>Cailloutis de base</i>	6	2
<i>Les Gastines</i>		6	2
<i>Montfarville</i>		7- 6?	1
<i>Saint-Martin-Osmonville</i>	<i>NA</i>	6 ?	1
<i>Mauquenchy</i>	<i>N3</i>	8-6	1
<i>Le Long Buisson</i>	<i>Série marron</i>	6- 5?	1

North-Eastern France



Site	Level/Layer	MIS	Value of MIS correlation (x/5)
<i>Achenheim</i>	<i>Sol 81</i>	9?	2
<i>Argoeuves</i>	<i>Série grisâtre</i>	8	2
<i>Argoeuves</i>	<i>Série roussâtre</i>	8	2
<i>Gouzeaucourt</i>	<i>H</i>	8 or older	2
<i>Gouzeaucourt</i>	<i>G</i>	8 or older	2
<i>Gentelles</i>	<i>CLG</i>	8 ?	2
<i>Salouel</i>	<i>1974</i>	8/7	2
<i>Salouel</i>	<i>1976</i>	8/7	2
<i>Gentelles</i>	<i>LBP</i>	7 ?	2
<i>Bapaume</i>	<i>Série B</i>	7/6 ?	2
<i>Riencourt-lès-Bapaume</i>	<i>Série III</i>	7 or 6 ?	1
<i>Gentelles</i>	<i>LGC</i>	6?	2
<i>Champvoisy</i>	-	8 or 6?	2
<i>Saint-Acheul</i>	-	8-6	2
<i>Bagarre</i>	<i>Couche 10</i>	8-6	1
<i>Bagarre</i>	<i>Couche 7</i>	8-6	1
<i>Bagarre</i>	<i>Couche 5</i>	8-6	1
<i>Longavesnes</i>	-	8-6	1
<i>Beaumetz-lès-Loges</i>	<i>Série lustrée</i>	8-6	1
<i>Beaumetz-lès-Loges</i>	<i>Série jaune</i>	8-6	1
<i>Tillet</i>	<i>Série blanche</i>	8-6	1
<i>Tillet</i>	<i>Série grise</i>	8-6	1
<i>Vimy</i>	-	8-6	1

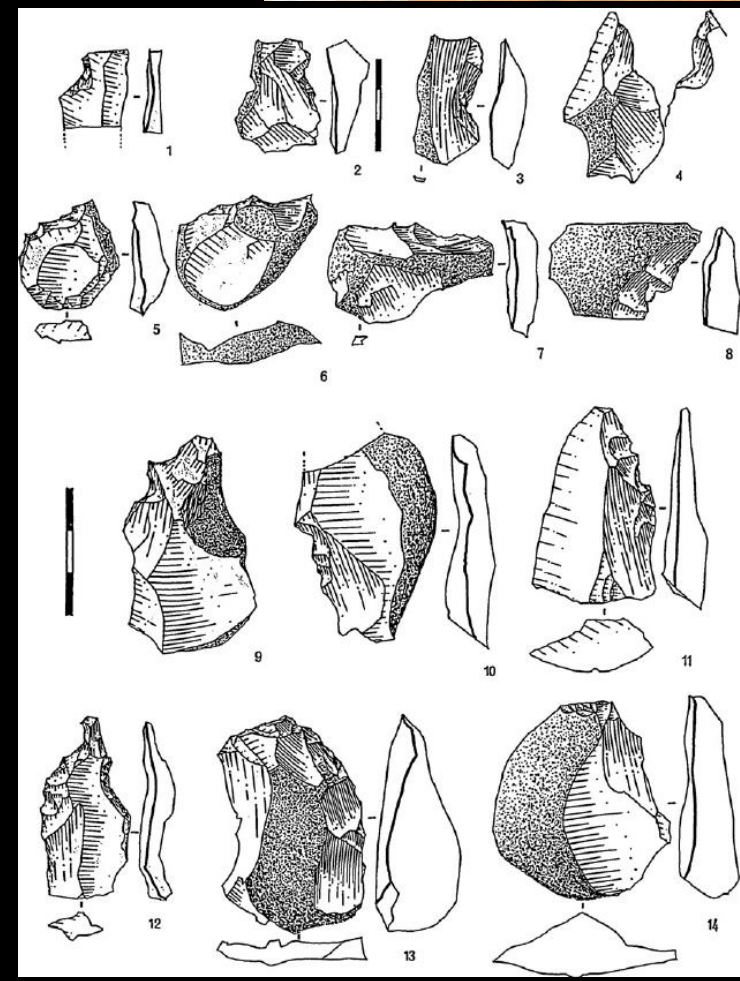
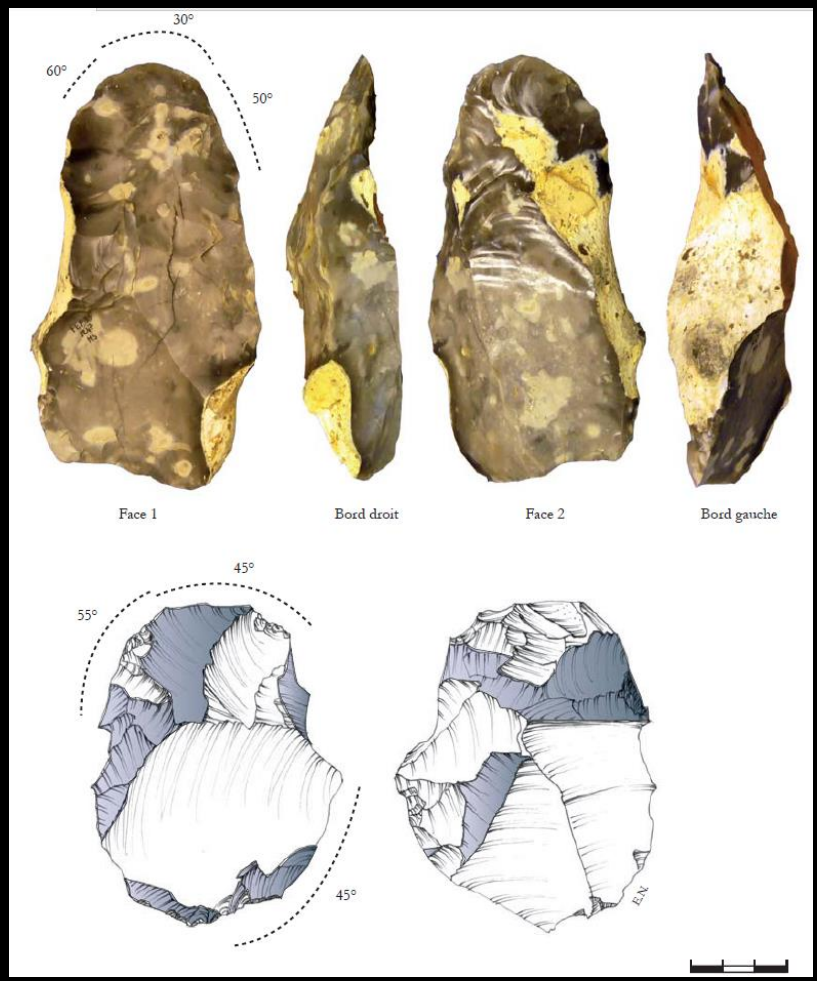
What Saalien assessment for the Northern France ?



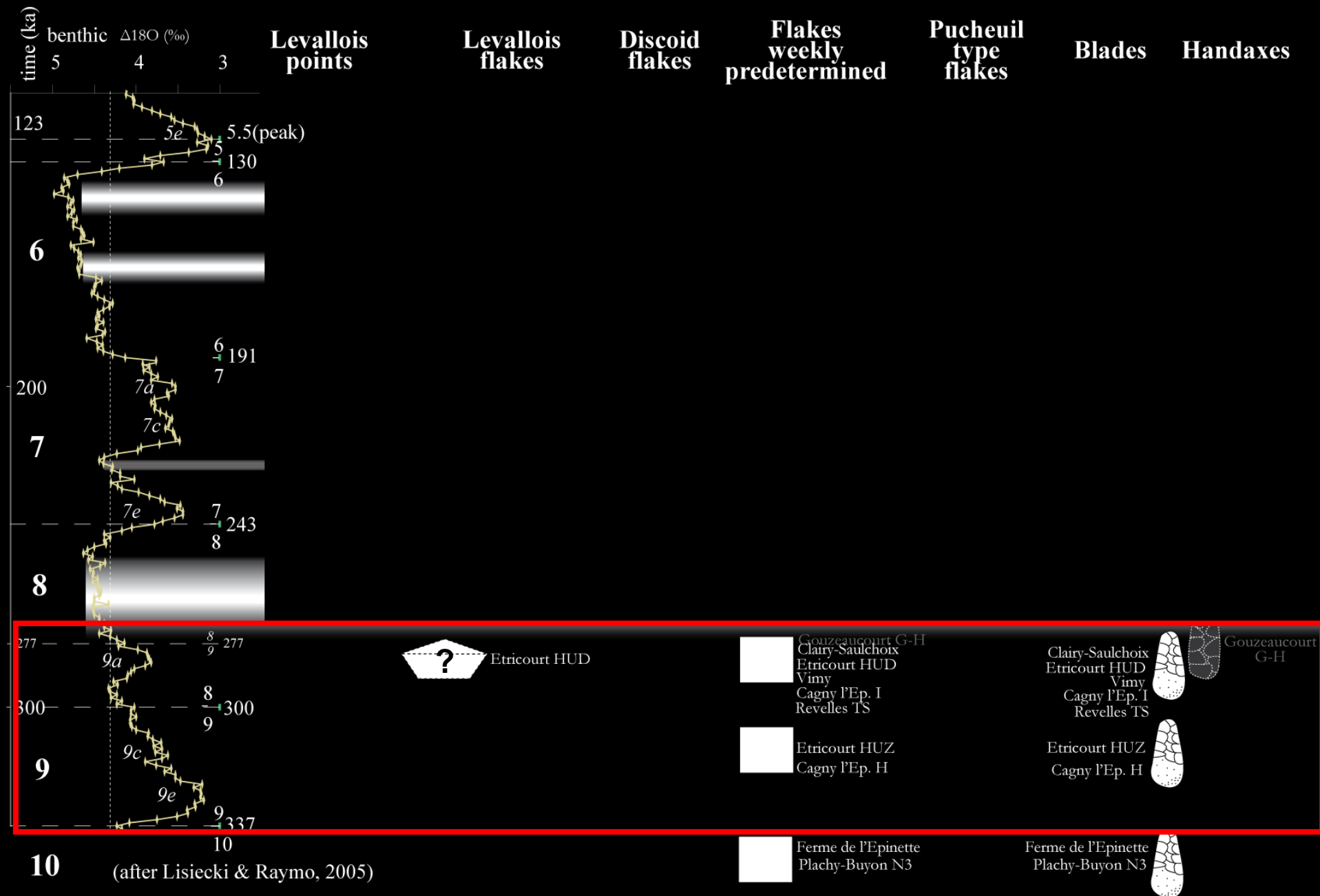
MIS 10 (374-337ka)

Cagny – Ferme de l'Épinette MS

MIS 10 – ca 360 ka
 2 500 m² 1 116 artefacts
 48 refittings (166 artefacts)



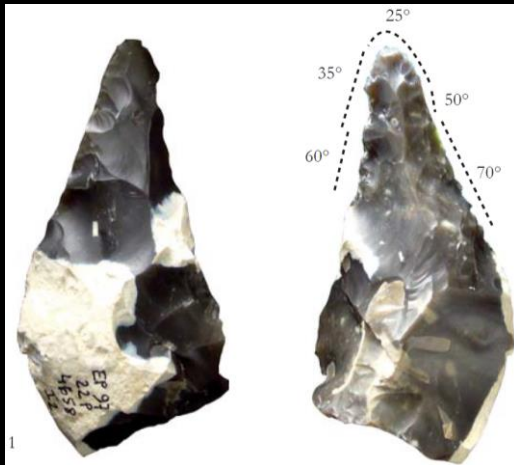
What Saalien assessment for the Northern France ?



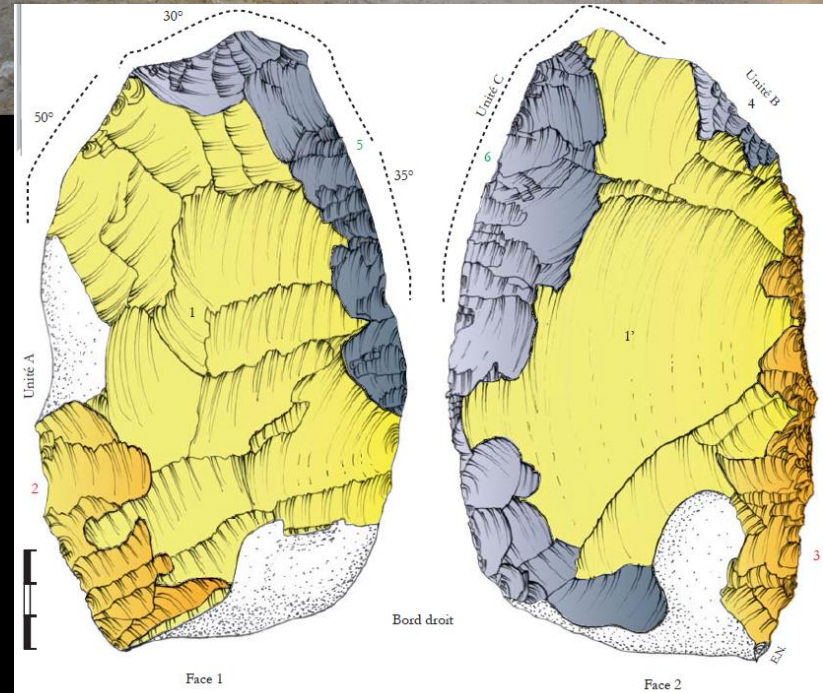
MIS 9 (337-277ka) Cagny-l'Épinette

MIS 9c – ca 320-300 ka

~100 m² 6 436 artefacts



Nicoud, 2011 PhD

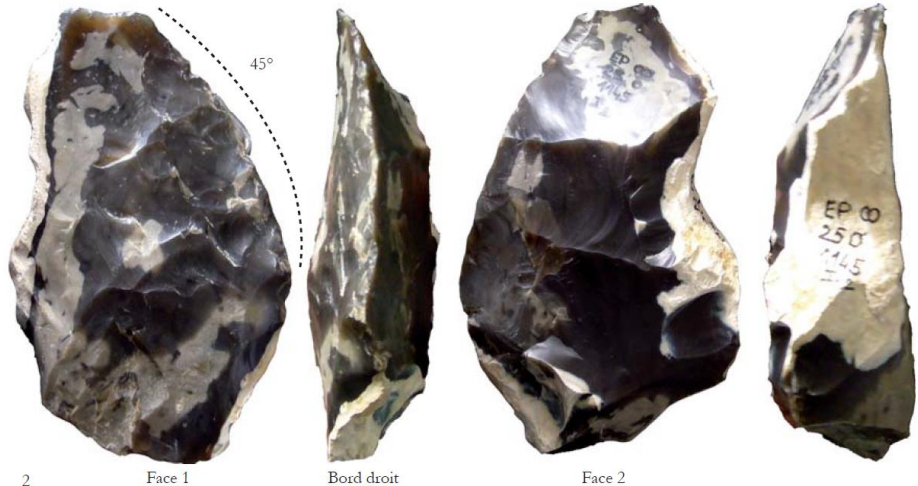


Étapes de construction de la pièce bifaciale :

1/ Mise en forme du support bifacial

1 à 1' Enlèvements unipolaires bifaciaux très envahissants faiblement convexes

Surface plane
Surface convexe



2

Face 1

Bord droit

Face 2



MIS 9 (337-277ka) Etricourt-Manancourt (HUD)

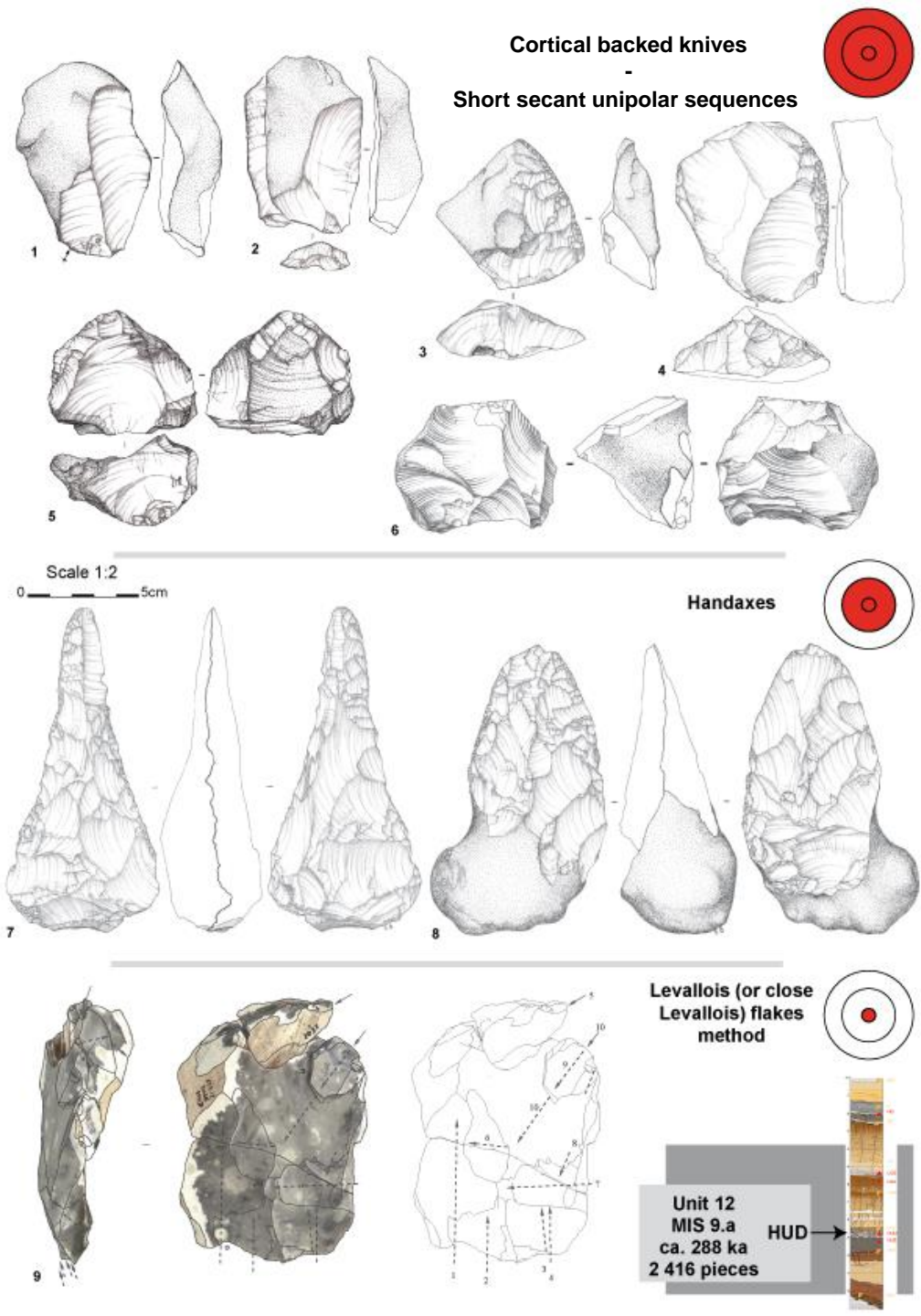
MIS 9a – ca 288 ka

4 300 m² 2 402 artefacts

56 refittings (229 artefacts)



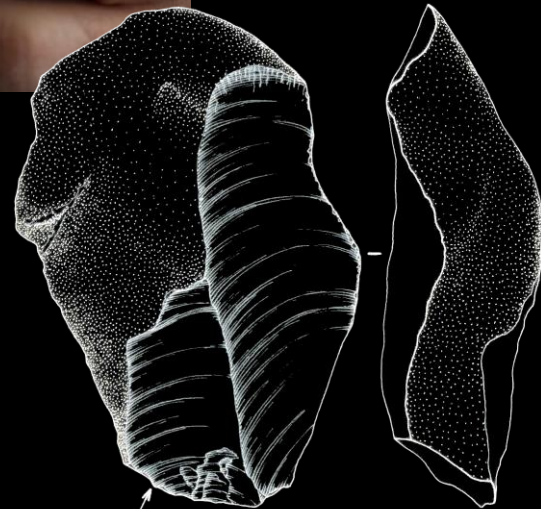
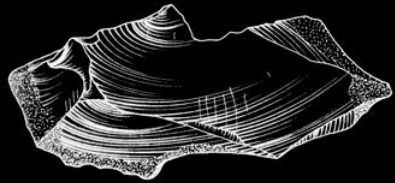
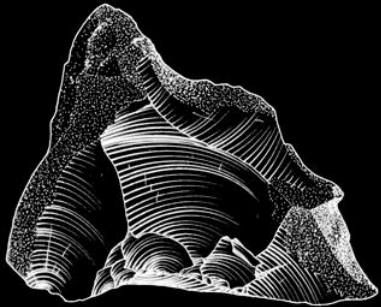
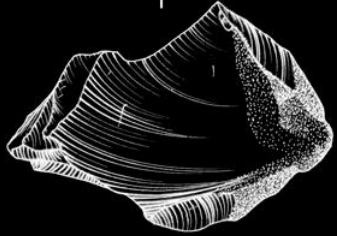
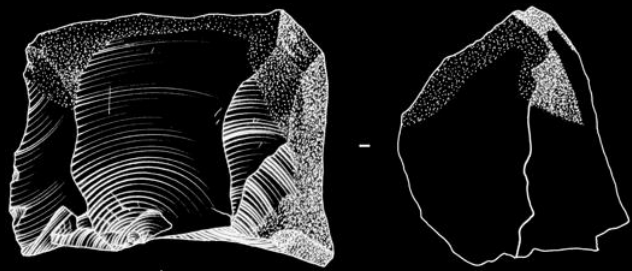
Hérisson et al., 2015 *Quat. Int.*



Refittings



Experimentation



Cortical backed-knives
Short secant unipolar sequences

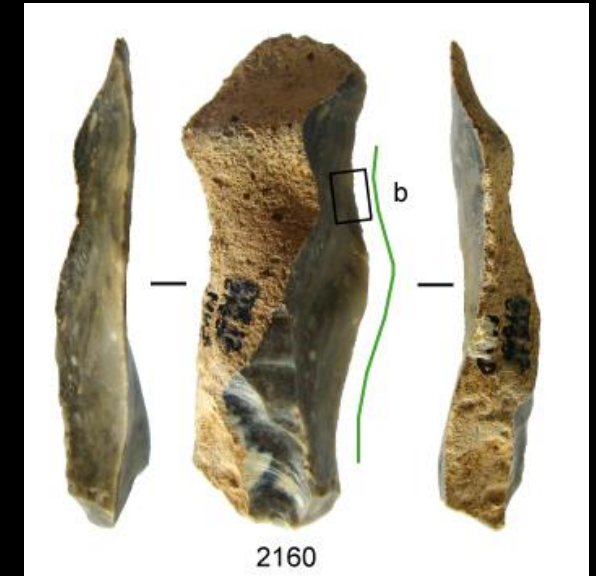
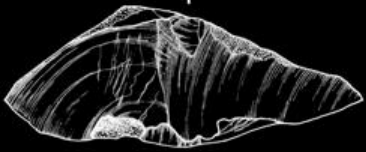
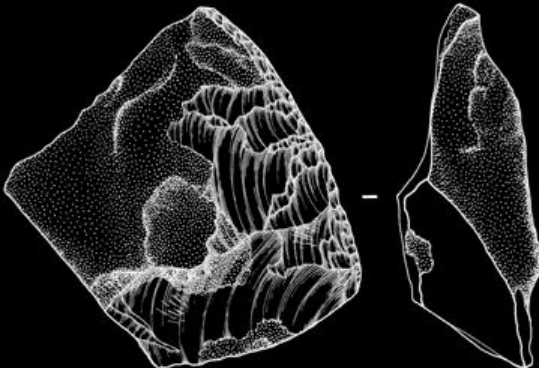
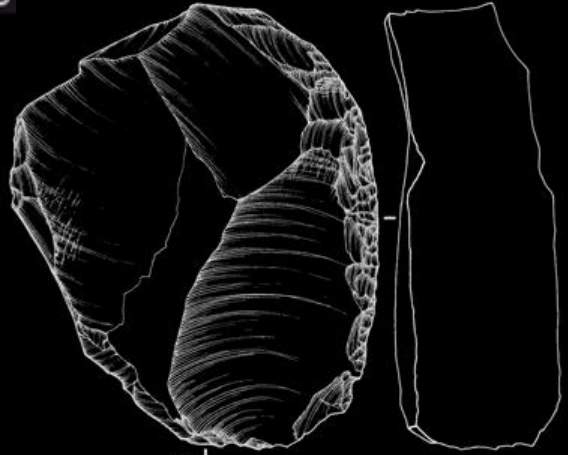
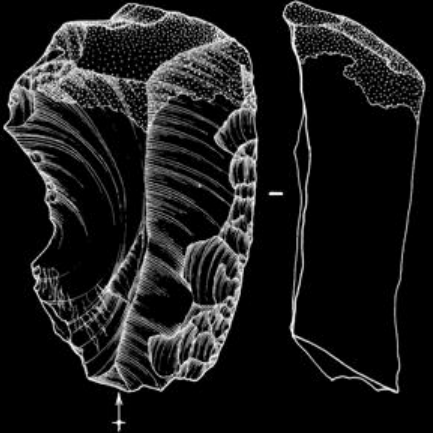


0 10cm

Cortical backed-knives
Short secant unipolar sequences



0 10cm

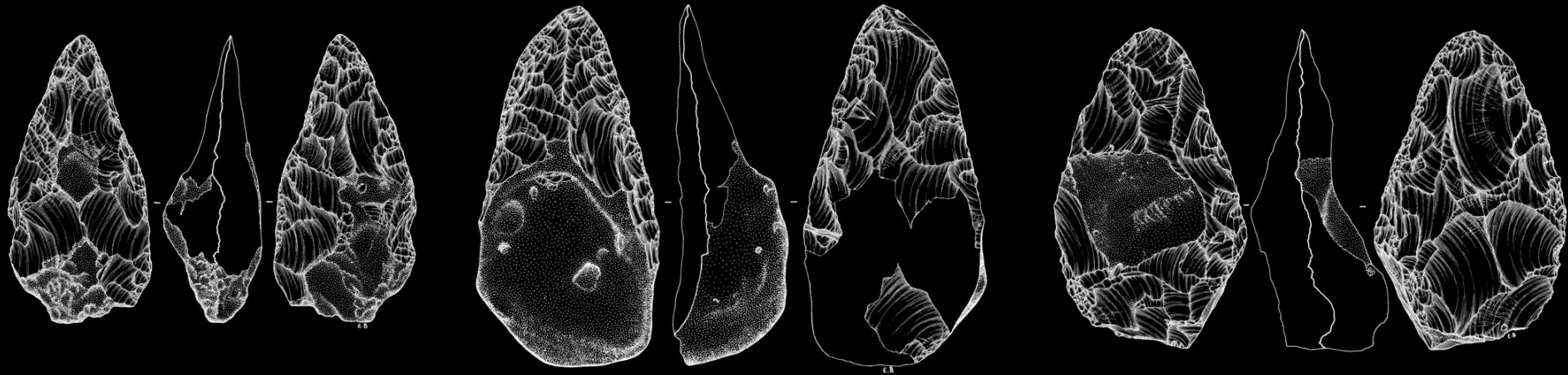
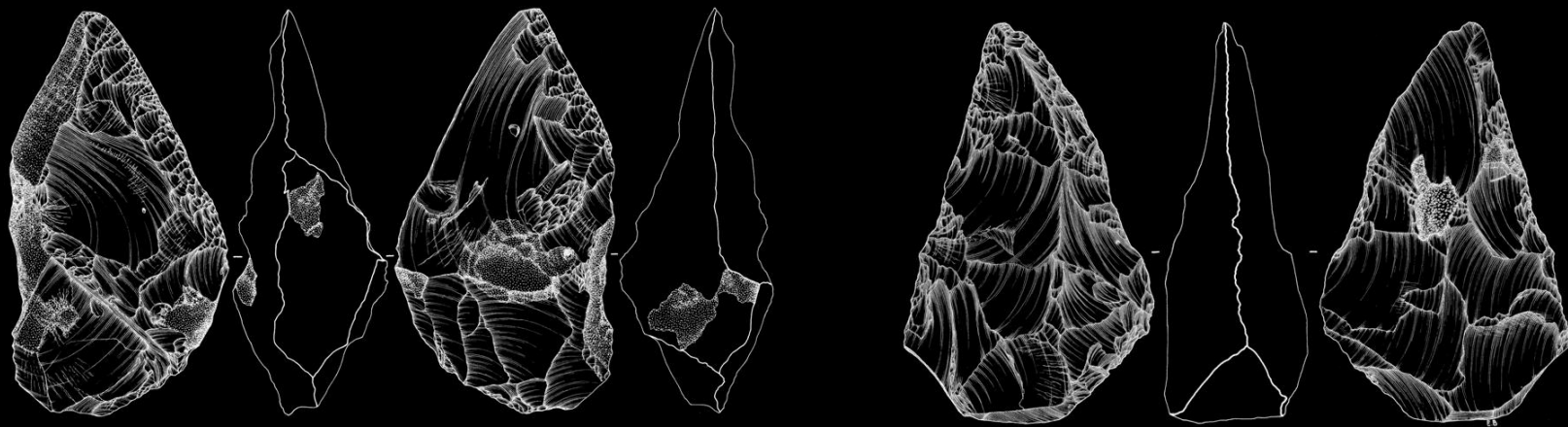
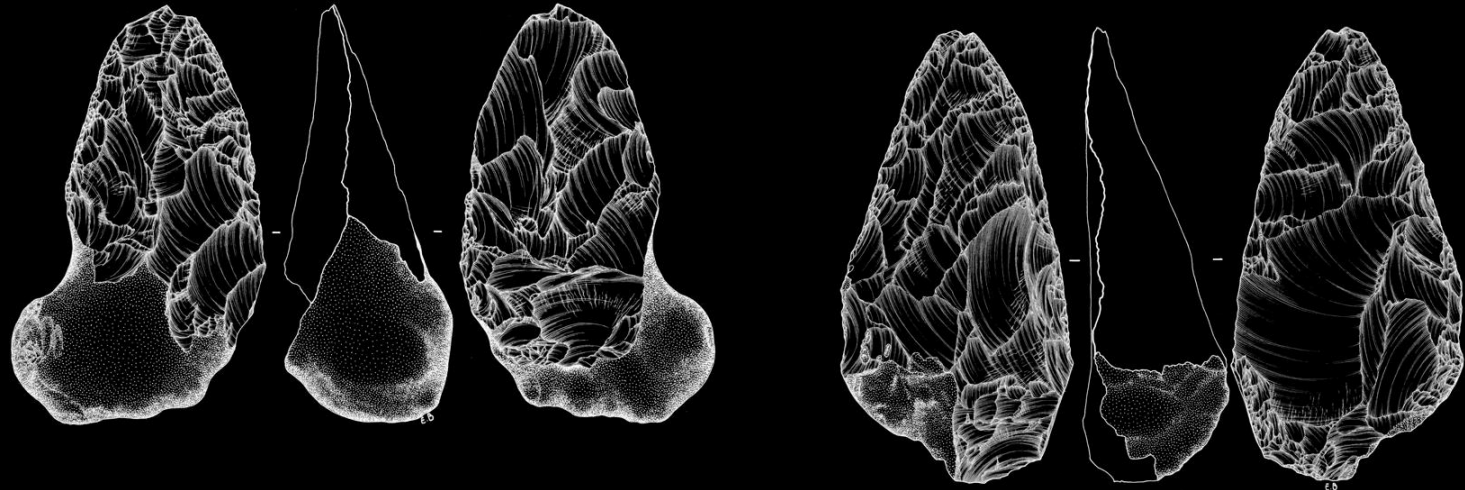


Use-wear analysis

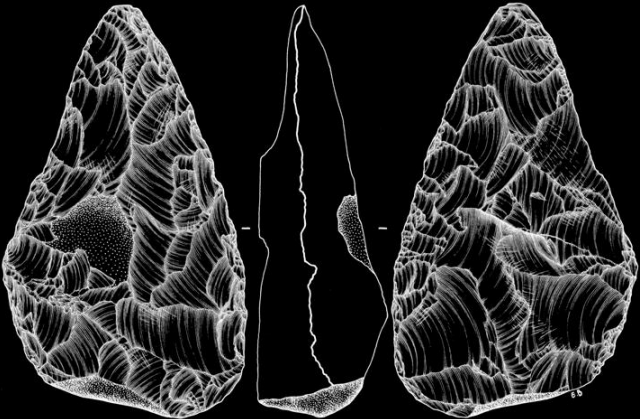
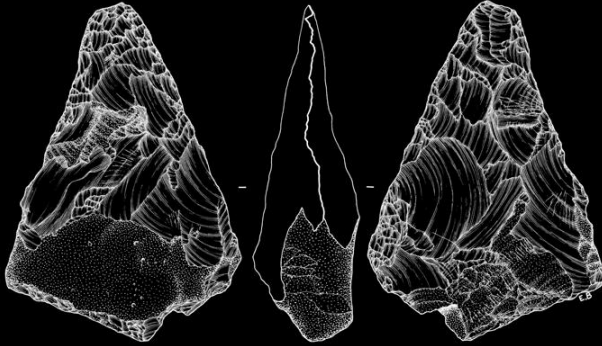
131 pieces with traces

+ 80% cutting of soft to mid-hard matter

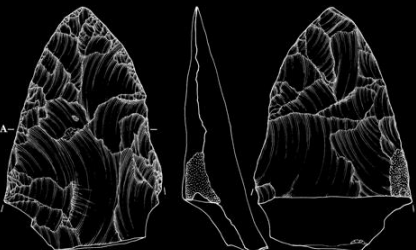
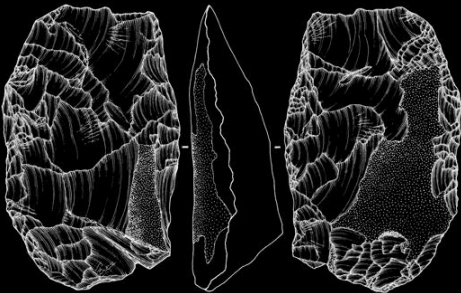
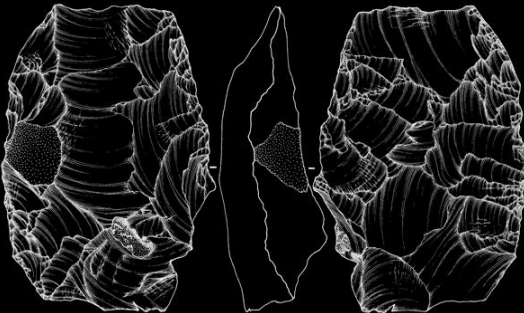
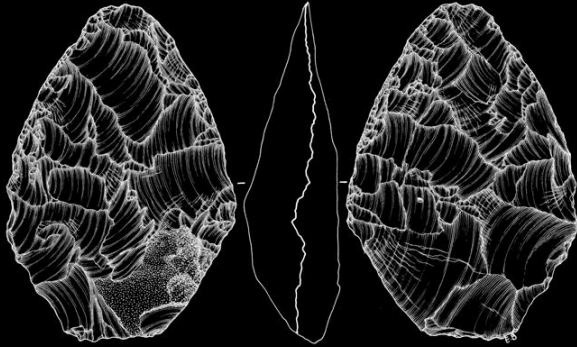
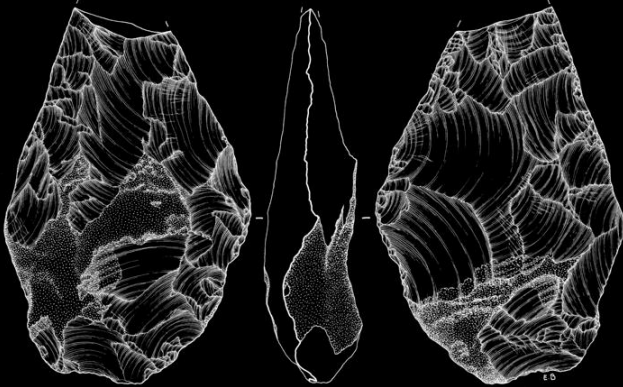
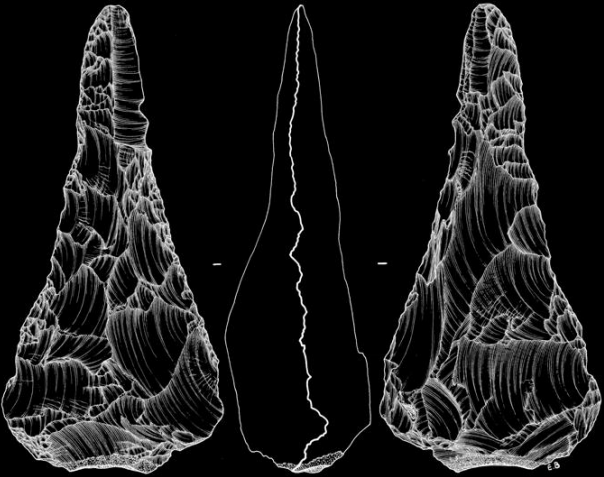
Bifaces



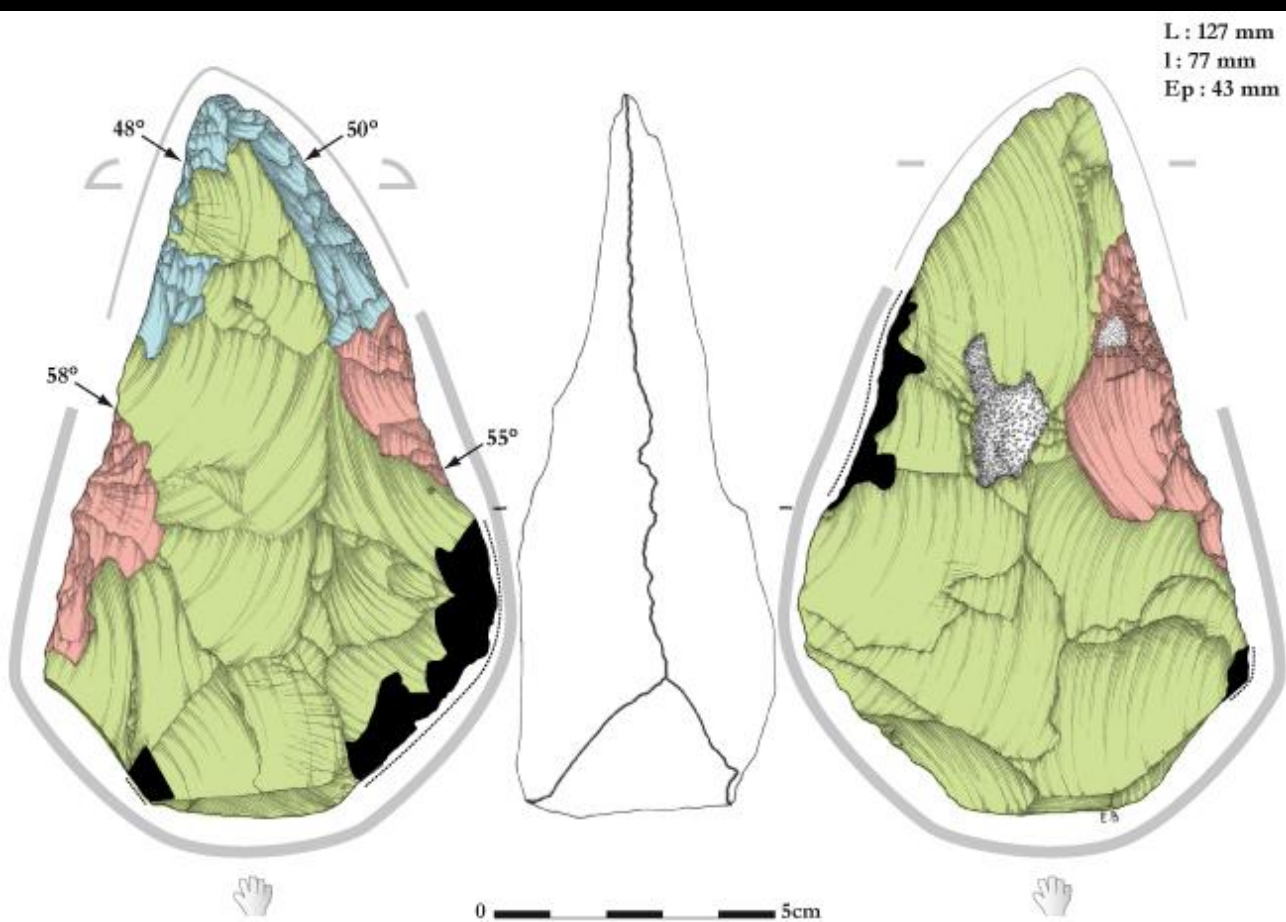
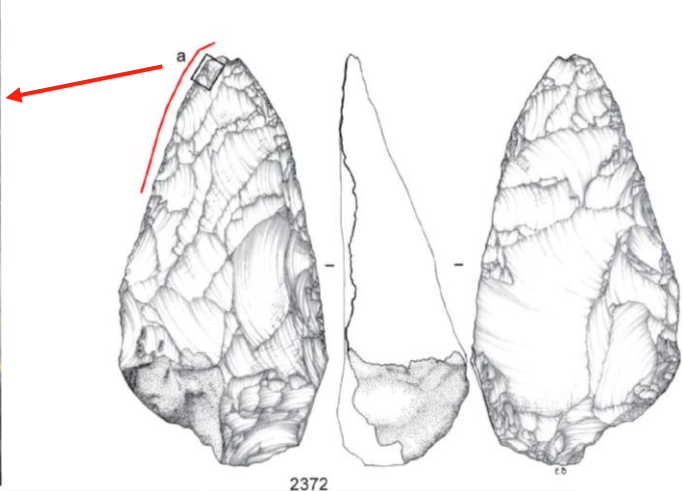
Bifaces



0 10cm



A-



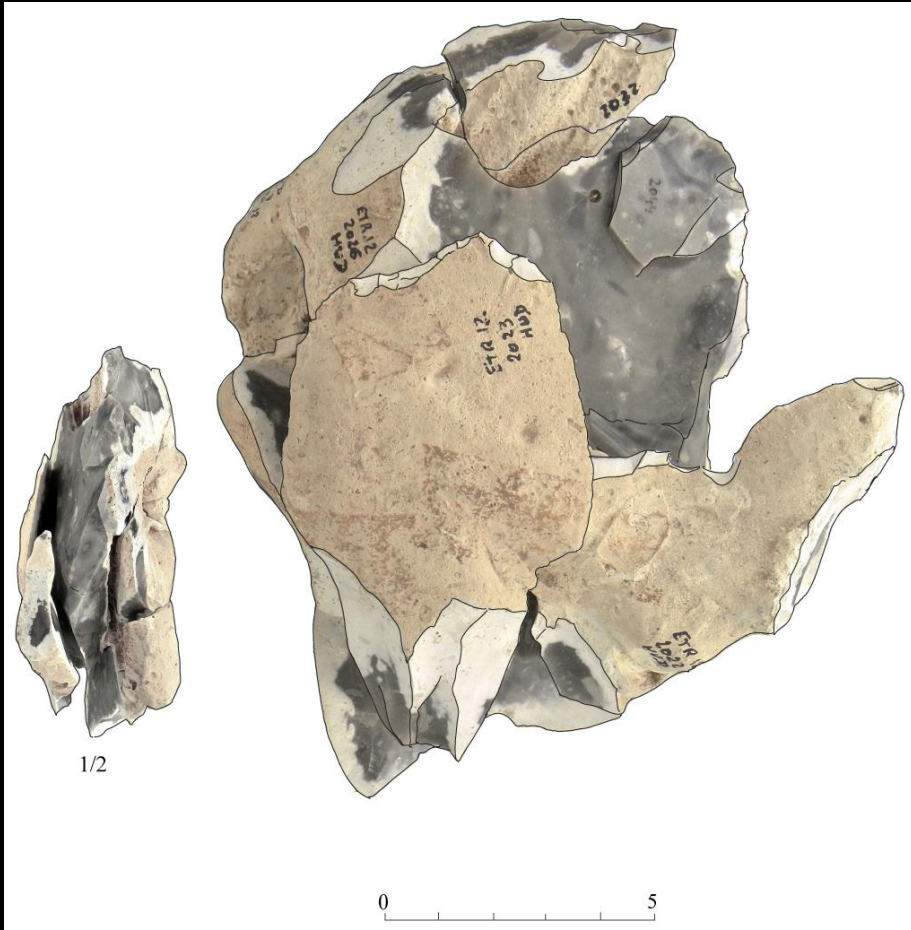
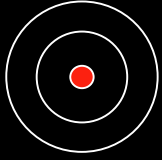
Use-wear analysis

13 bifaces &
5 shaping flakes

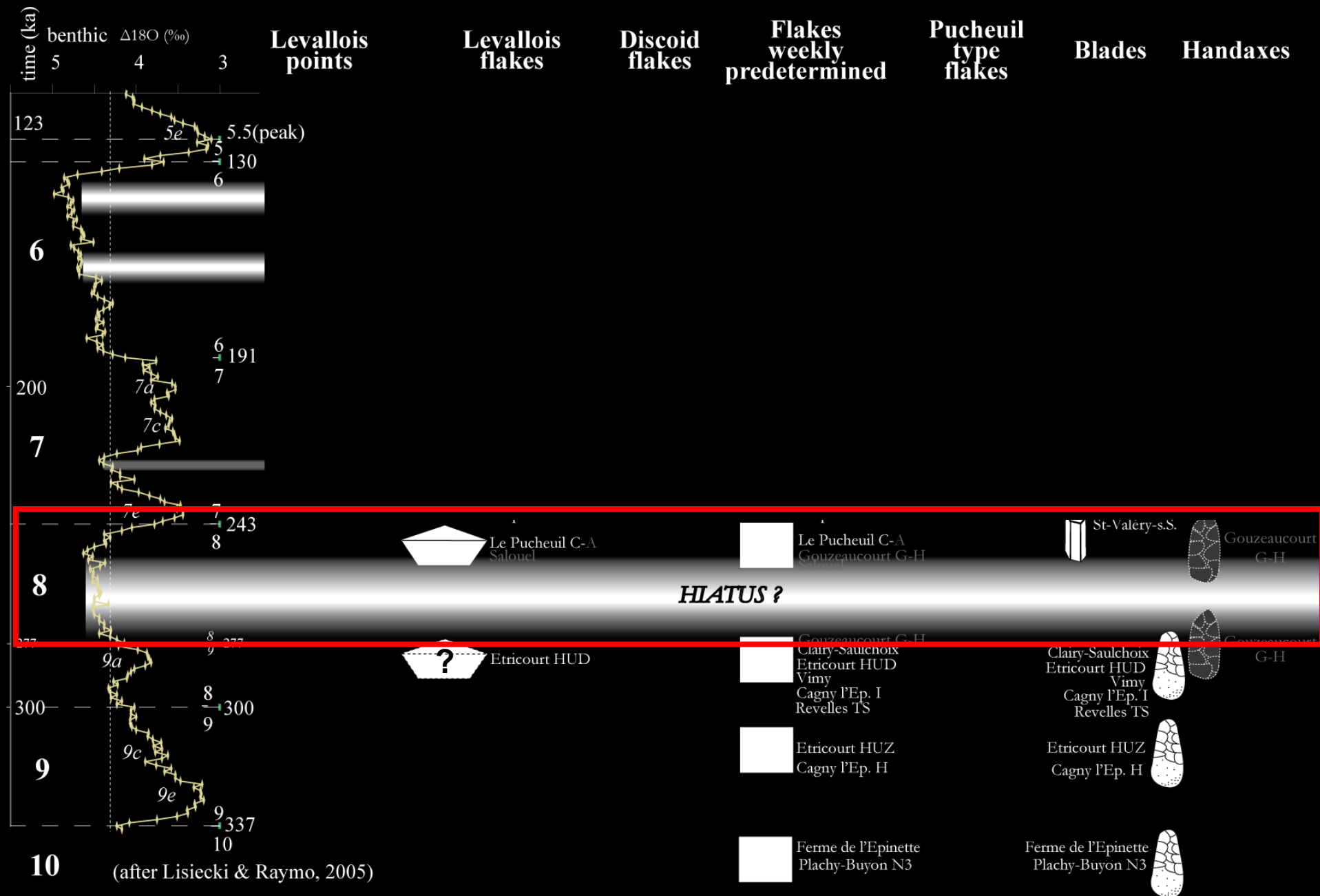
cutting of soft
to mid-hard matter

Intensive wear

On the road ... of the Levallois method



What Saalien assessment for the Northern France ?



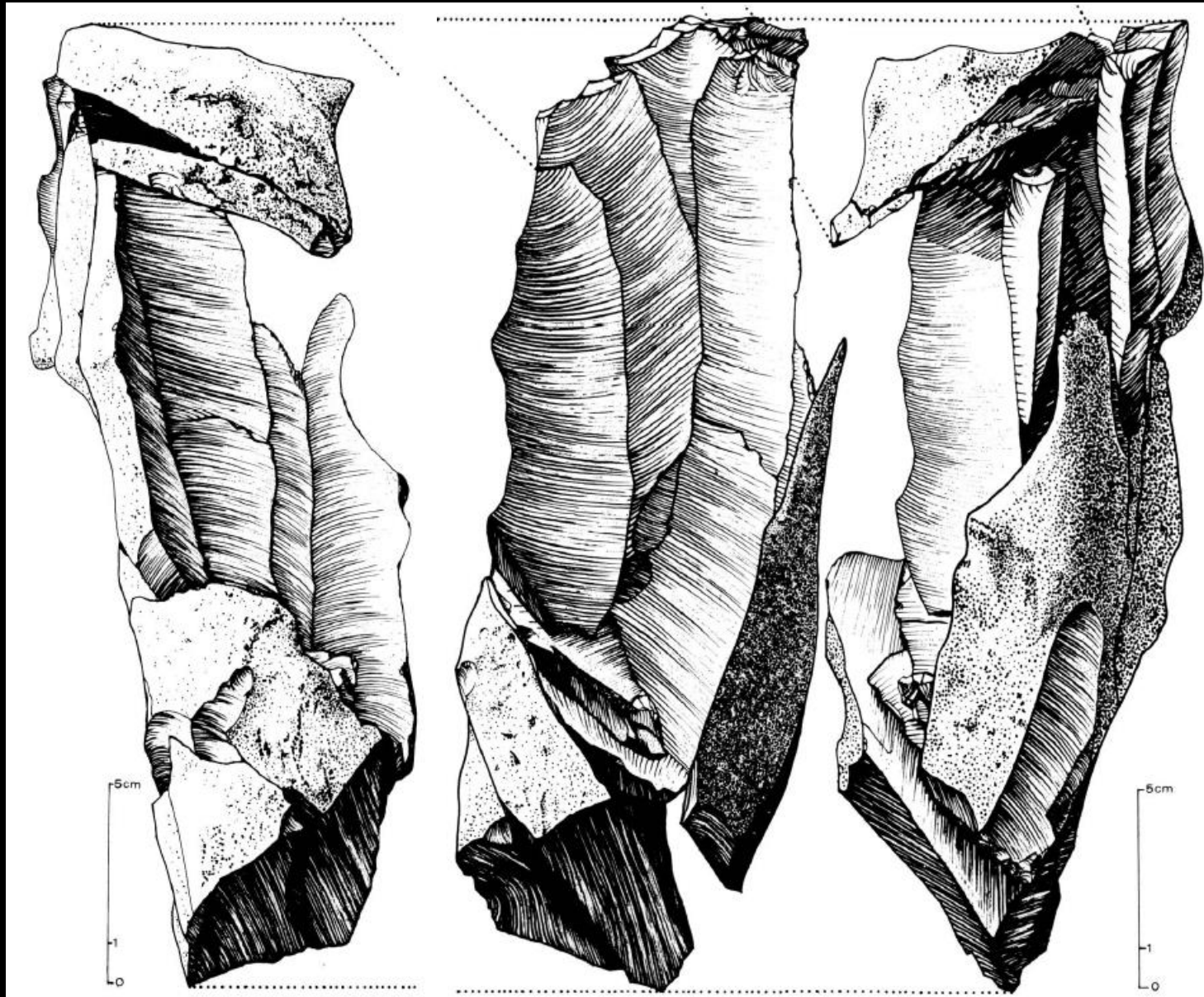
MIS 8 (277-243ka)

Saint-Valéry-sur-Somme

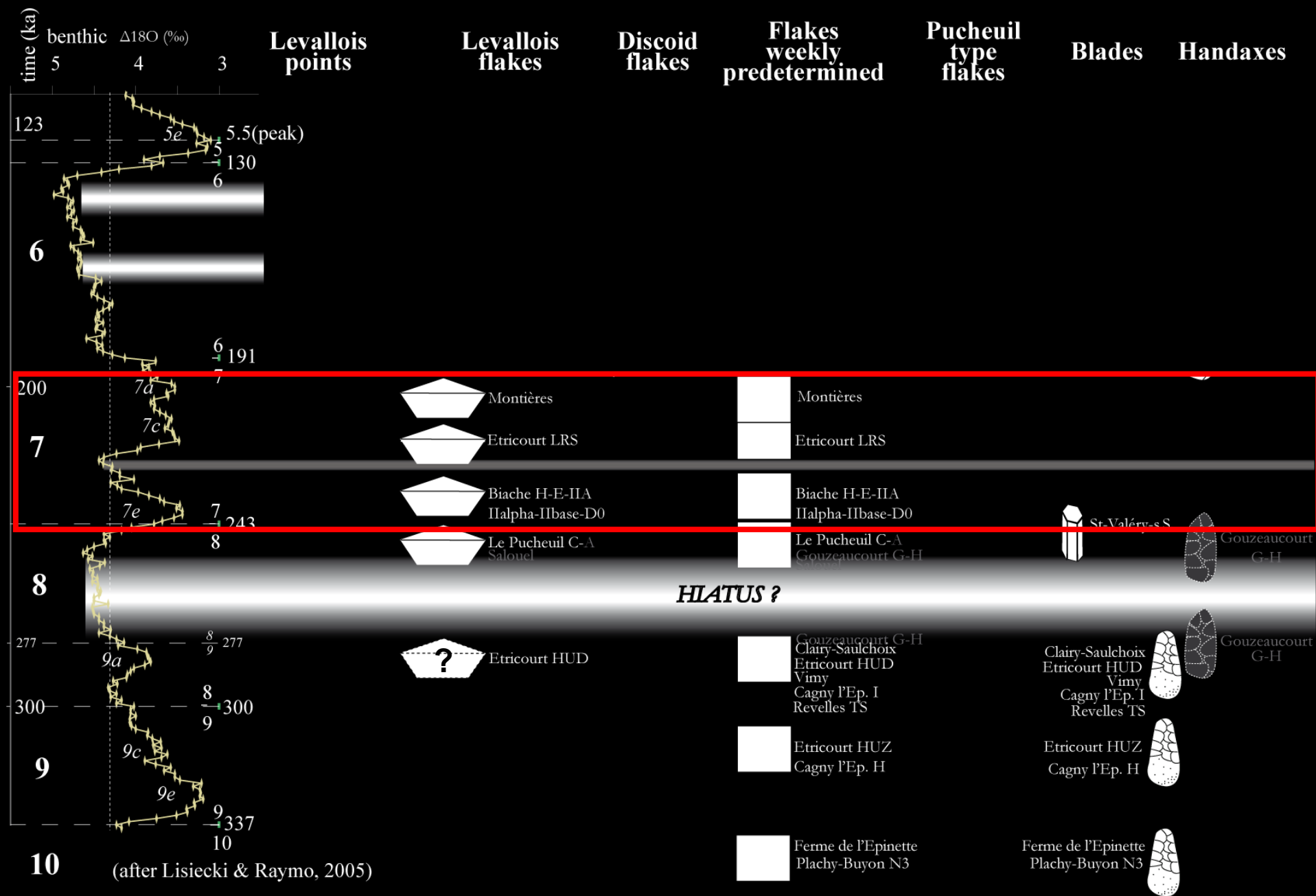
Section cleaning

133 artefacts

11 refittings
(55 artefacts)



What Saalien assessment for the Northern France ?

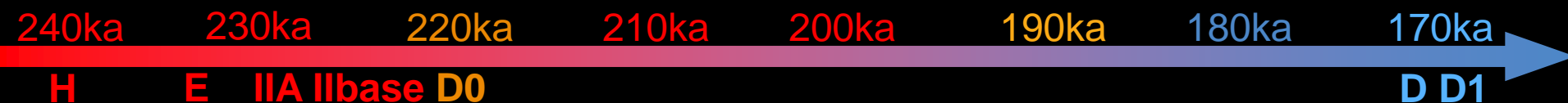
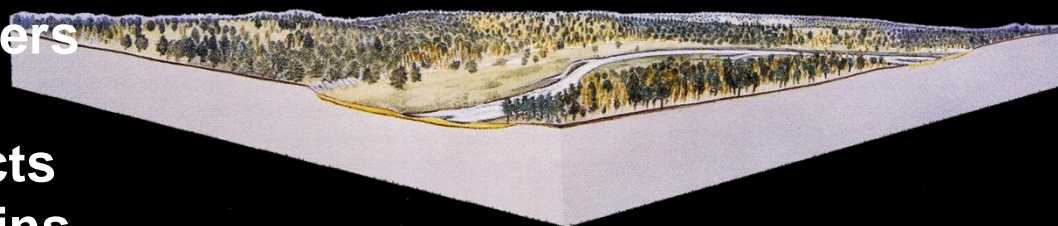


MIS 7 (243-191 ka)

Biache-Saint-Vaast



MIS 7 à 6
7 archaeological layers
1 100 m²
65 672 lithic artefacts
196 480 faunal remains



Levallois preferential

Levallois recurrent bipolar

Levallois recurrent centripetal

Levallois recurrent unipolar

Ramification
Hérisson 2012 PhD

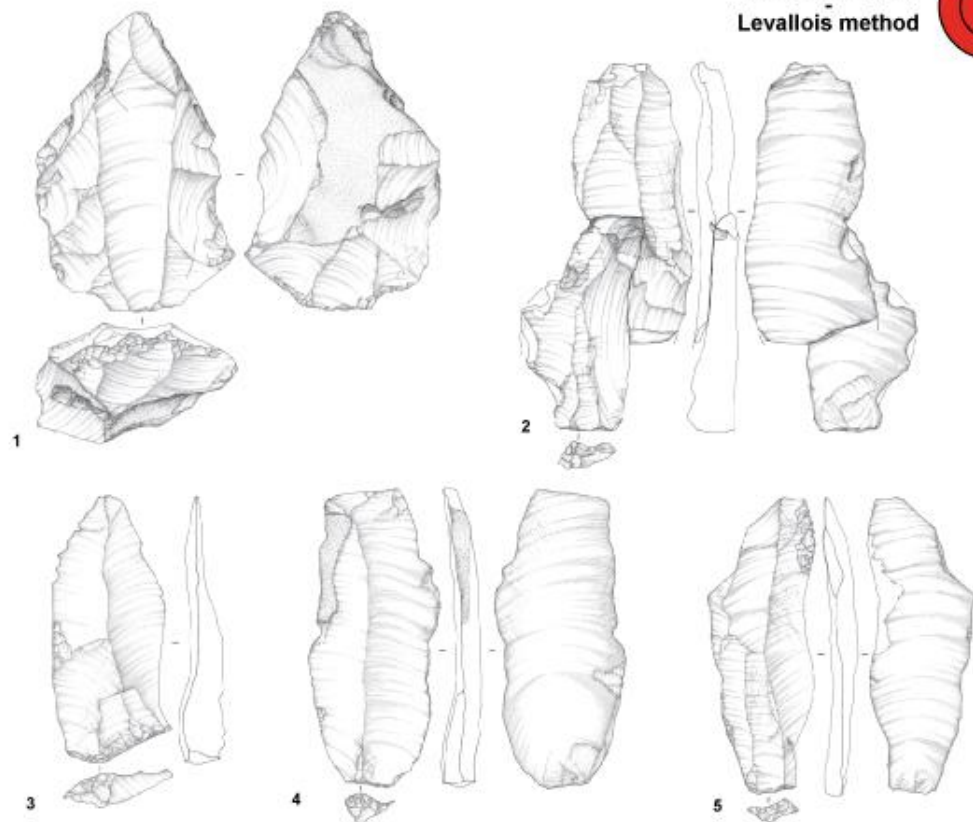


MIS 7 (243-191ka) Etricourt-Manancourt

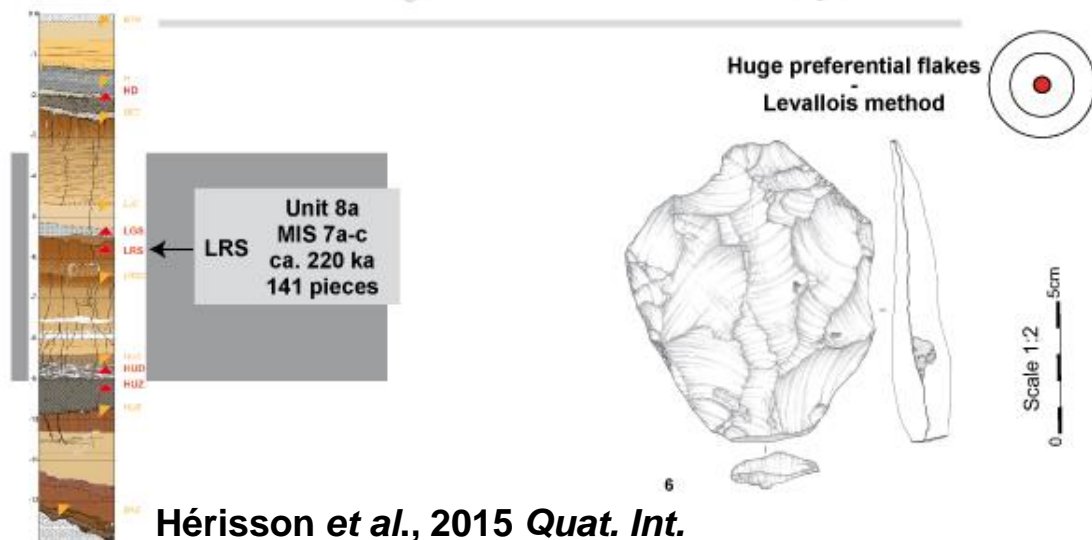
MIS 7a-c – ca 220ka

2 100 m² 141 artefacts

6 refittings (20 artefacts)



Elongated flakes
Levallois method



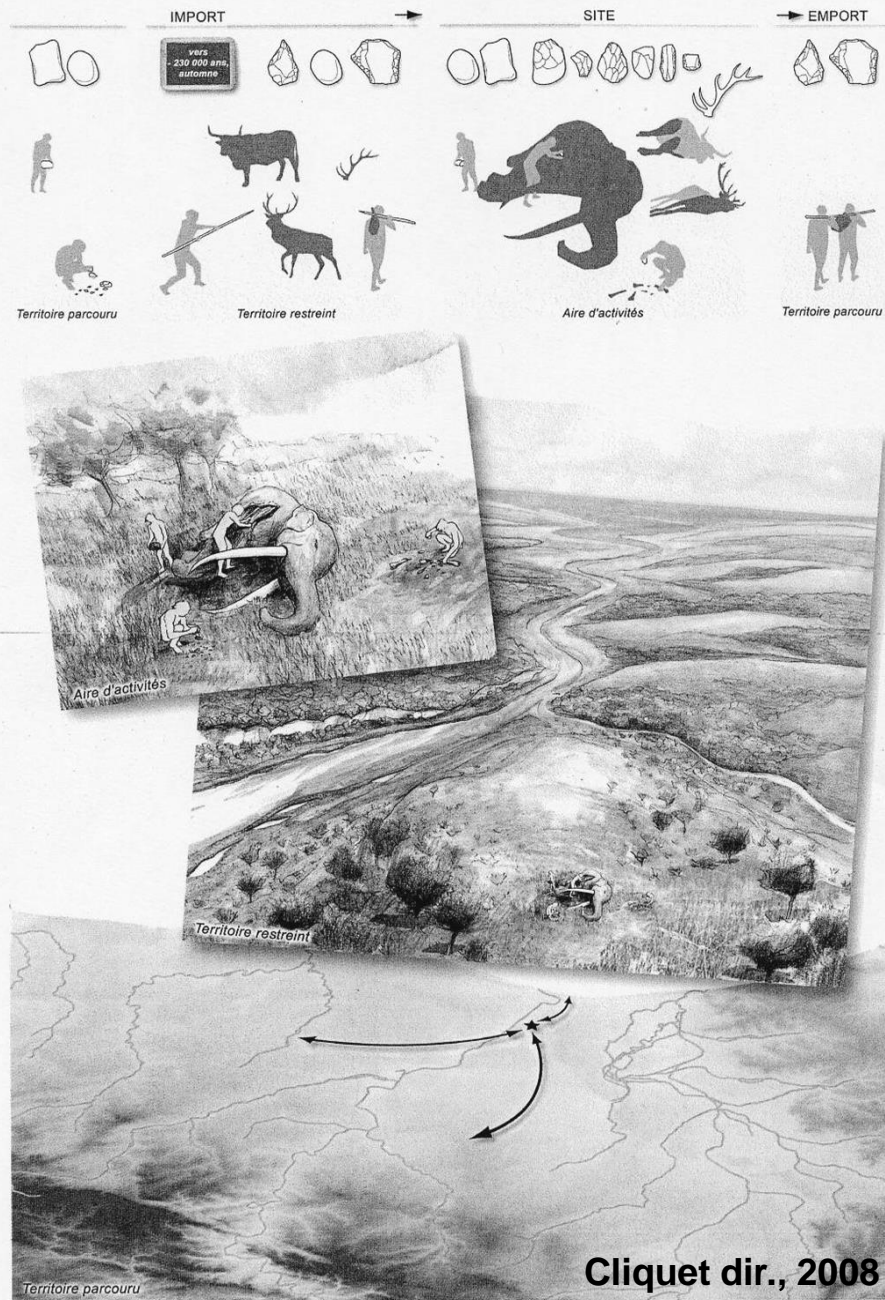
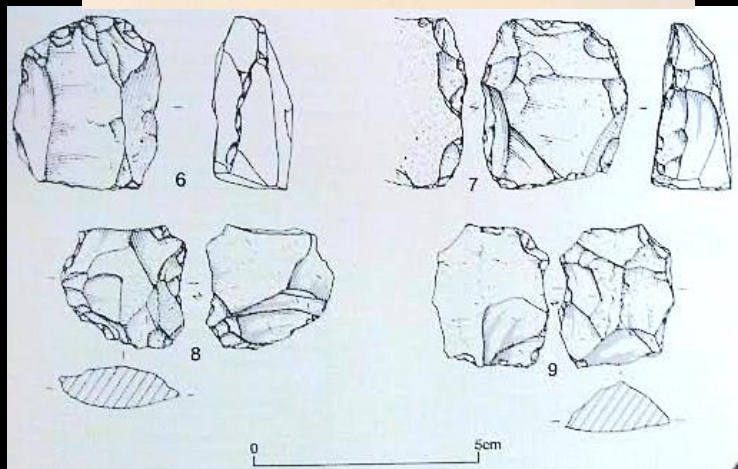
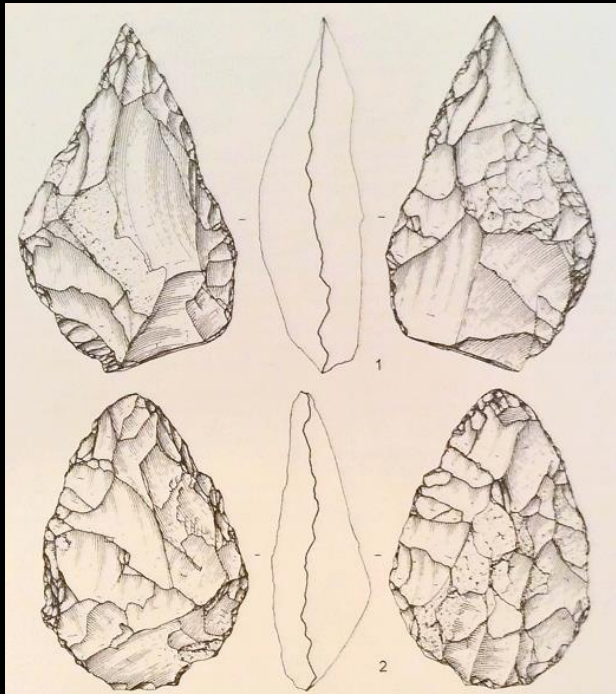
Hérisson et al., 2015 *Quat. Int.*

MIS 7 (243-191 ka)

Ranville

MIS 7 (235-205 ka)

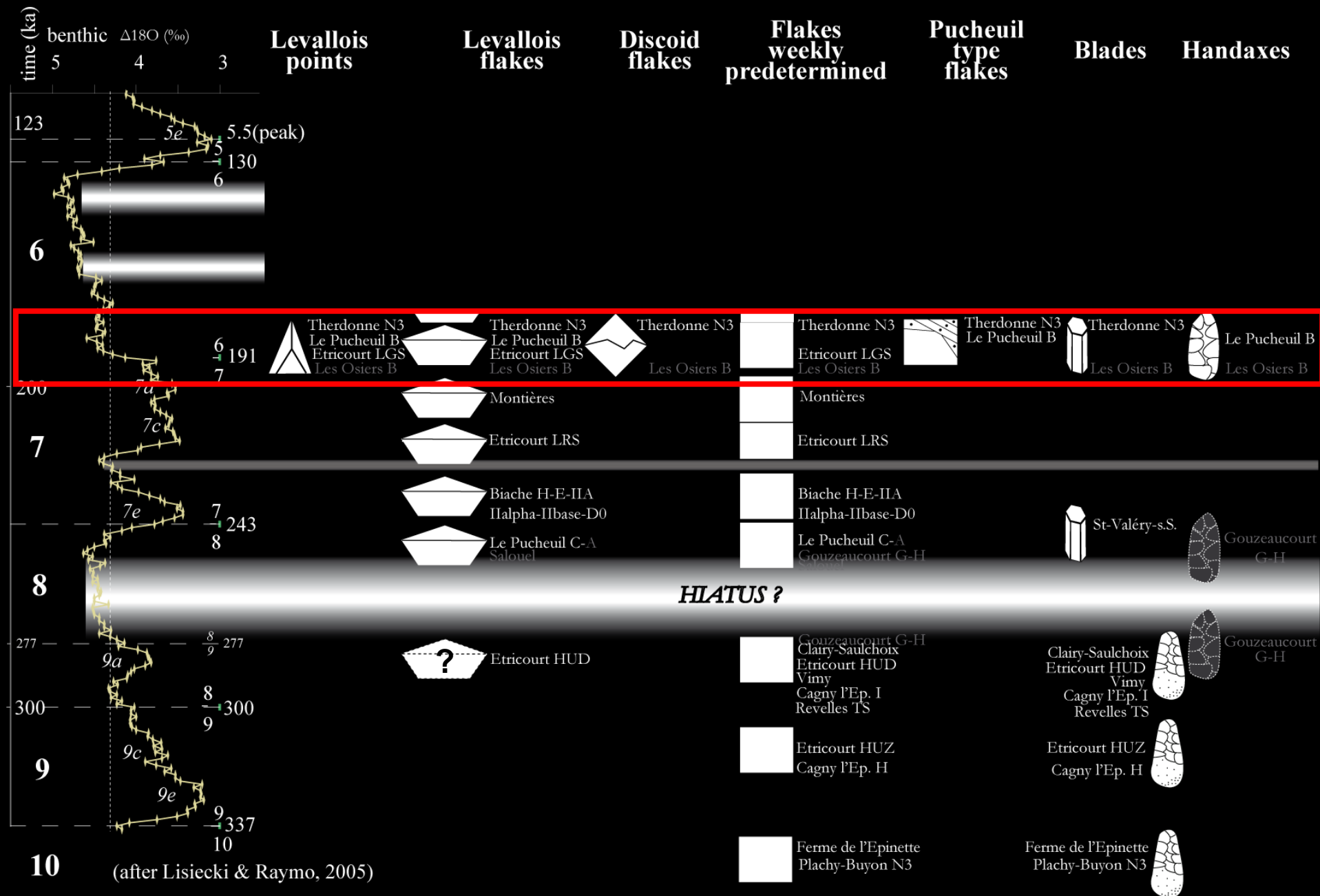
333 artefacts & 698 faunal remains



Cliquet dir., 2008

Figure 154 - Evocation du fonctionnement du site (D.A.O Bertrand Fauq, illustrations Laurent Jubel).
Figure 154 - Artist's impression of the site (CAD Bertrand Fauq, illustrations Laurent Jubel).

What Saalien assessment for the Northern France ?



MIS 7/6 (191-170ka)



Therdonne

MIS 7/6 (ca 178 ka)

1 occupation 305 m²

46 163 lithic artefacts

156 refittings (544 pieces)

Blocs de matière première

Eclats Levallois préférentiels

Importation

In situ



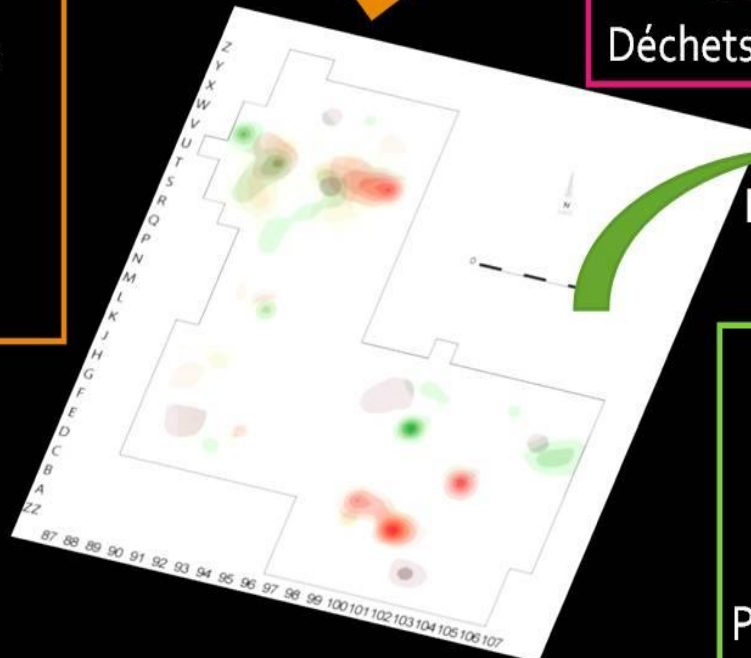
Déchets de production et outils abandonnés

Exportation



Pointes Levallois

Nucléus Levallois à pointes



MIS 7/6 (191-170ka)

Therdonne
MIS 7/6 (ca 178 ka)



Levallois points



Levallois flakes

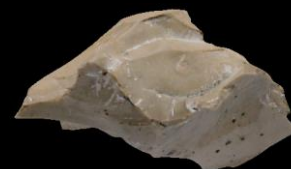


Blades

Flakes from weekly
predetermined
reduction



Flakes from
Discoid reduction



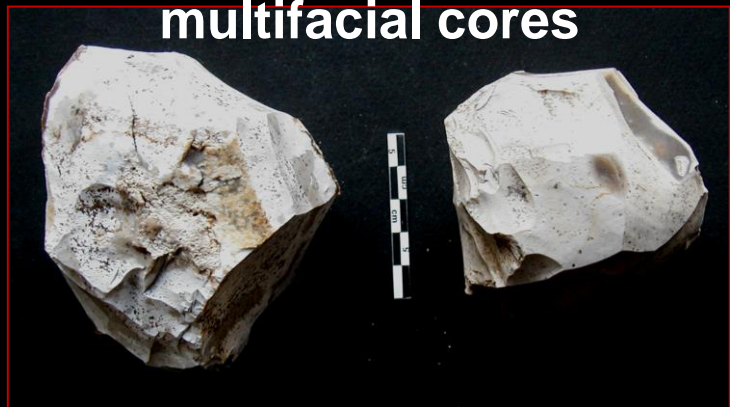
0 10cm

MIS 7/6 (191-170ka)

Elongated Levallois flakes



Polyhedral and/or multifacial cores



Numerous little elements

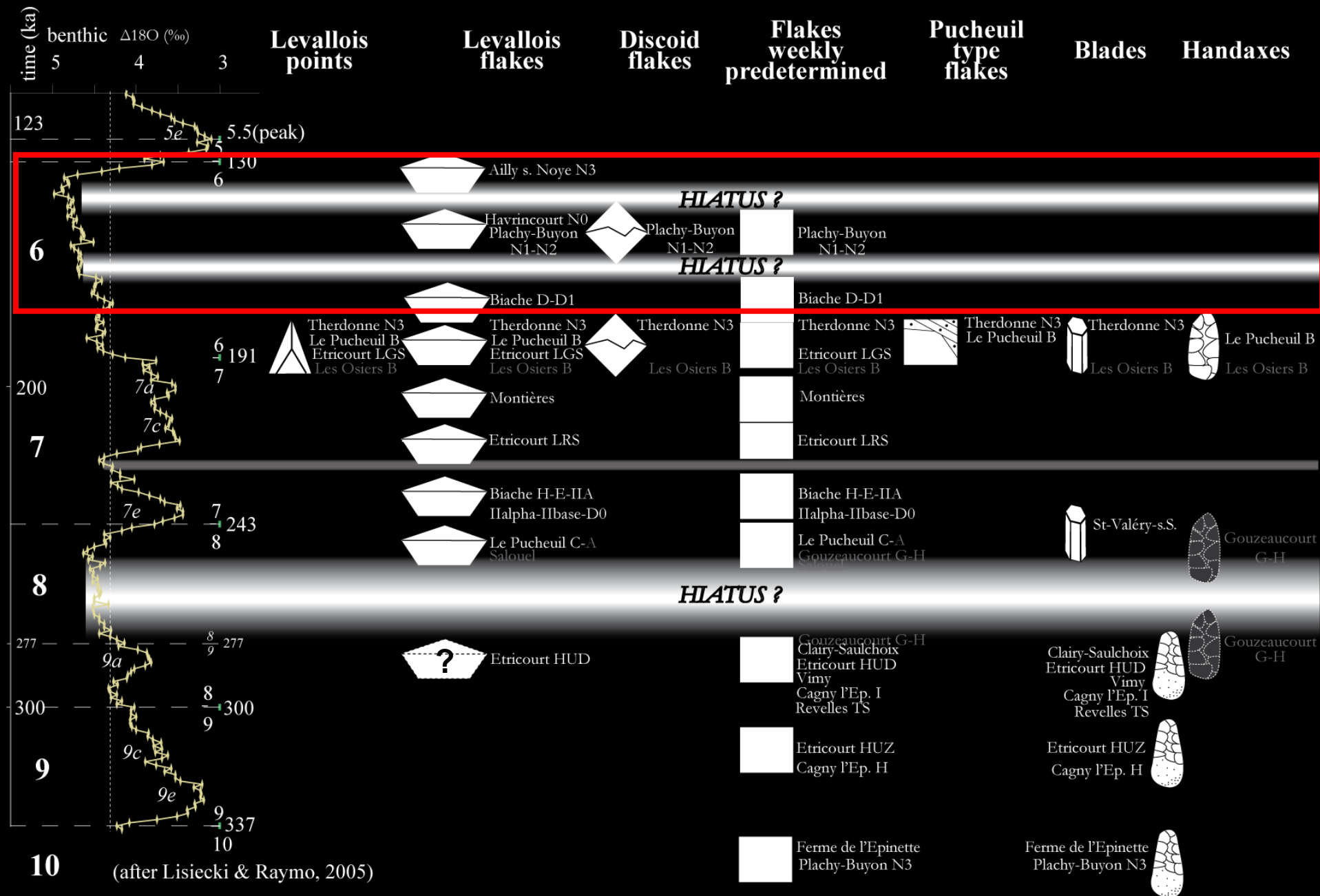


Tourville-la-rivière

MIS 7/6 (ca 200-170 ka)
3 occupations ~15 000m²



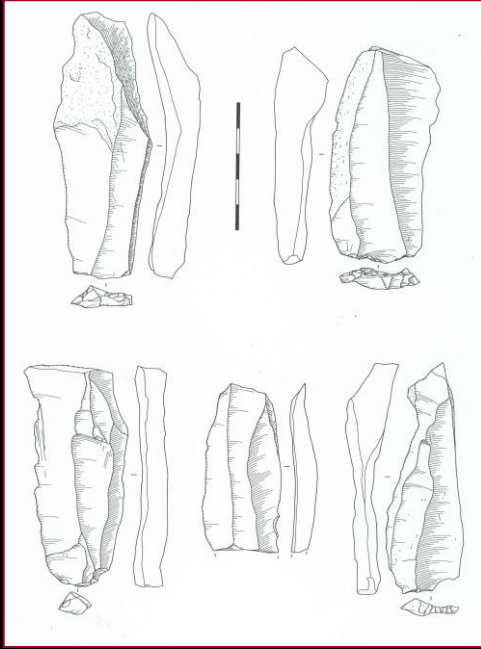
What Saalien assessment for the Northern France ?



MIS 6 (170-130ka)

Guichainville MIS 6

**+1 occupation 500 m²
2 396 lithic artefacts**

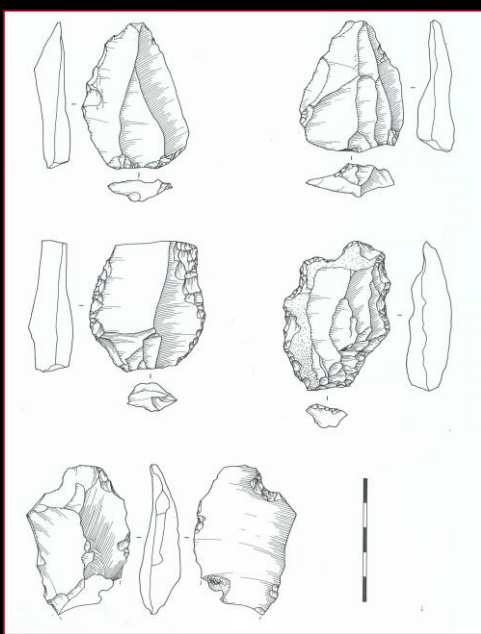


Production system

Direct débitage

Levallois débitage

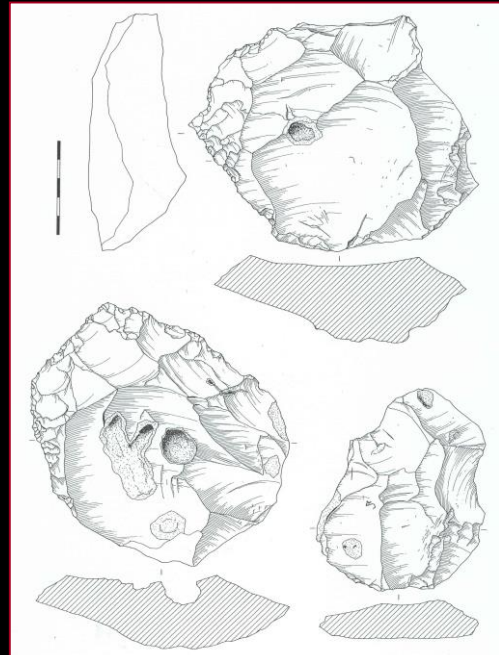
Discoid débitage



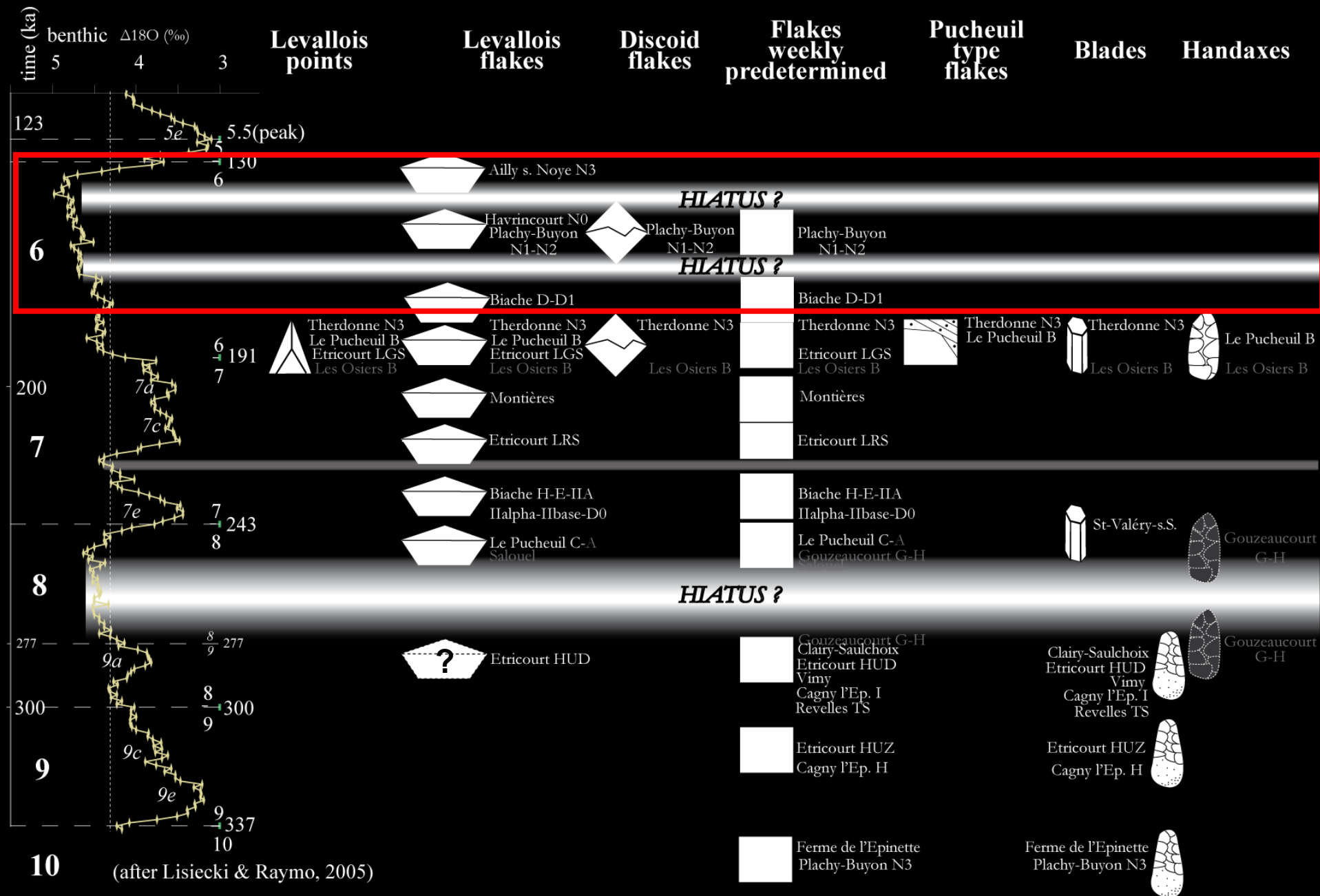
Tools

**Scrapers
Pièces à encoches**

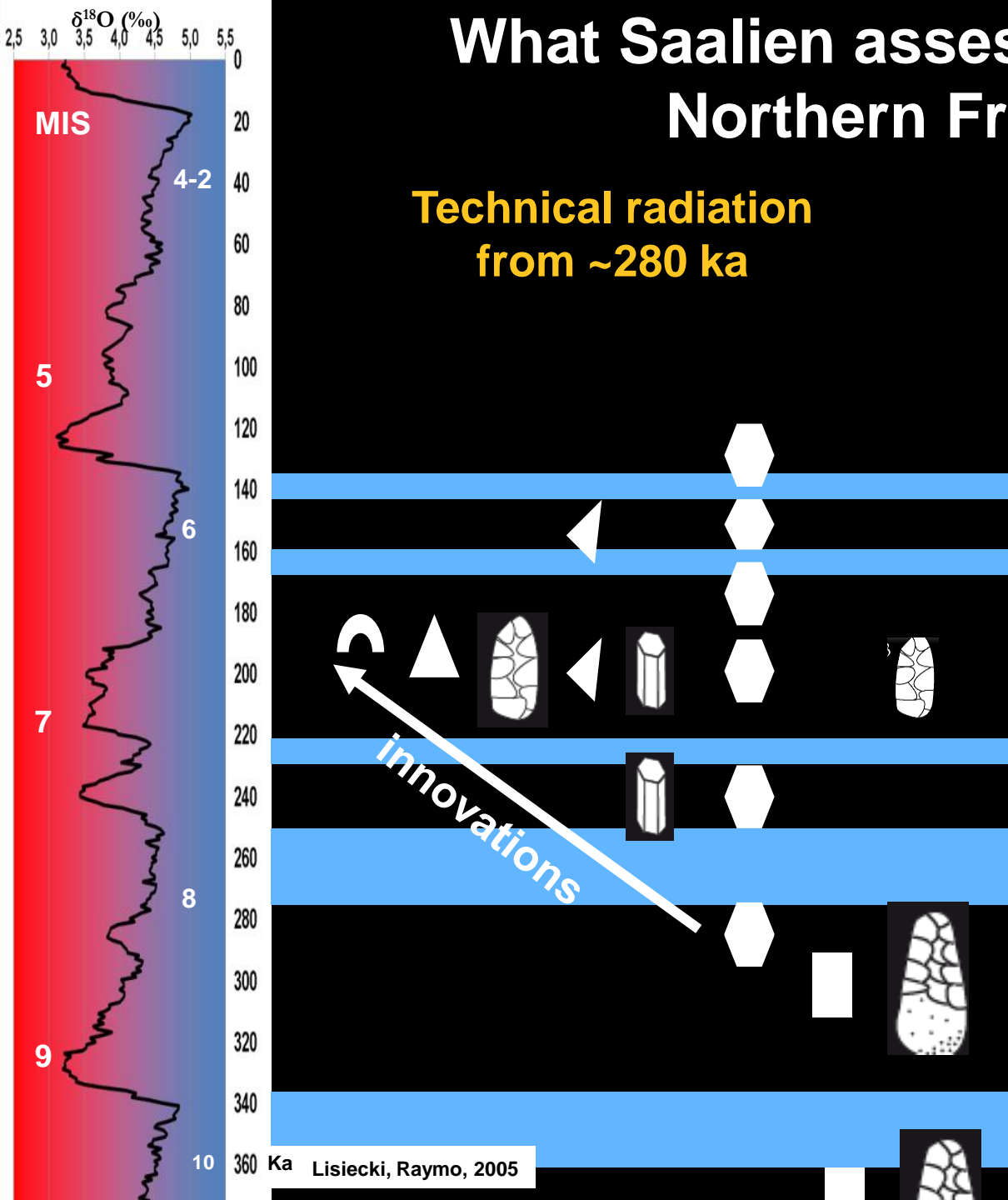
Rare bifacial pieces



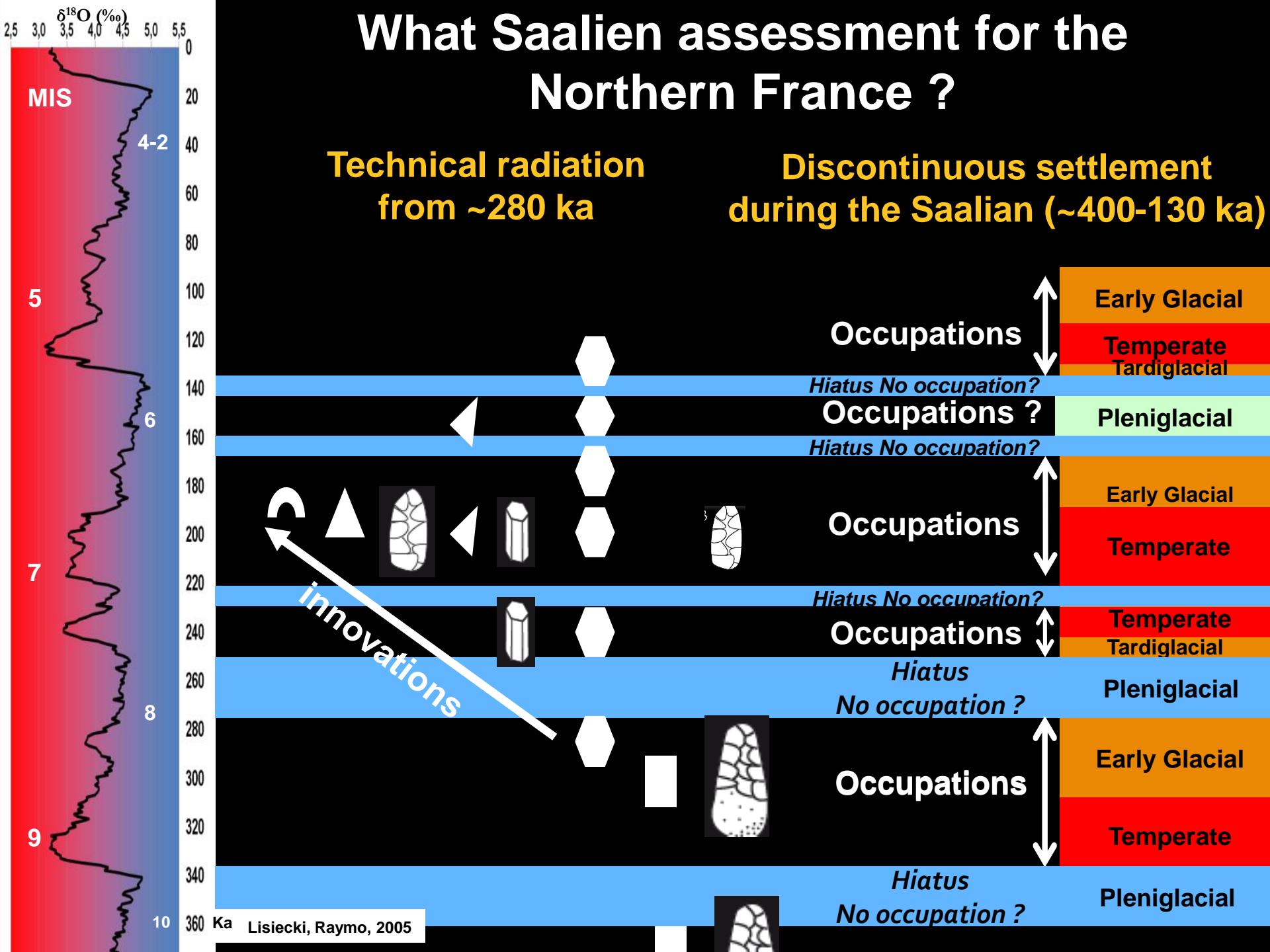
What Saalien assessment for the Northern France ?



What Saalien assessment for the Northern France ?



What Saalian assessment for the Northern France ?



Technical radiation from ~280 ka

Discontinuous settlement during the Saalian (~400-130 ka)

Occupations

Hiatus No occupation?

Occupations ?

Hiatus No occupation?

Occupations

Hiatus No occupation?

Occupations

Hiatus

No occupation ?

Occupations

*Hiatus
No occupation ?*

Early Glacial

Temperate
Tardiglacial

Pleniglacial

Early Glacial

Temperate

Temperate

Tardiglacial

Pleniglacial

Early Glacial

Temperate

Pleniglacial

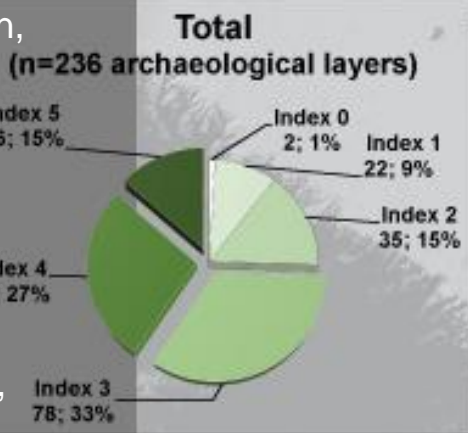
The onset of the Middle Palaeolithic in North-Western Europe

MIS 9 to 6

125 sites

236 archaeological layers

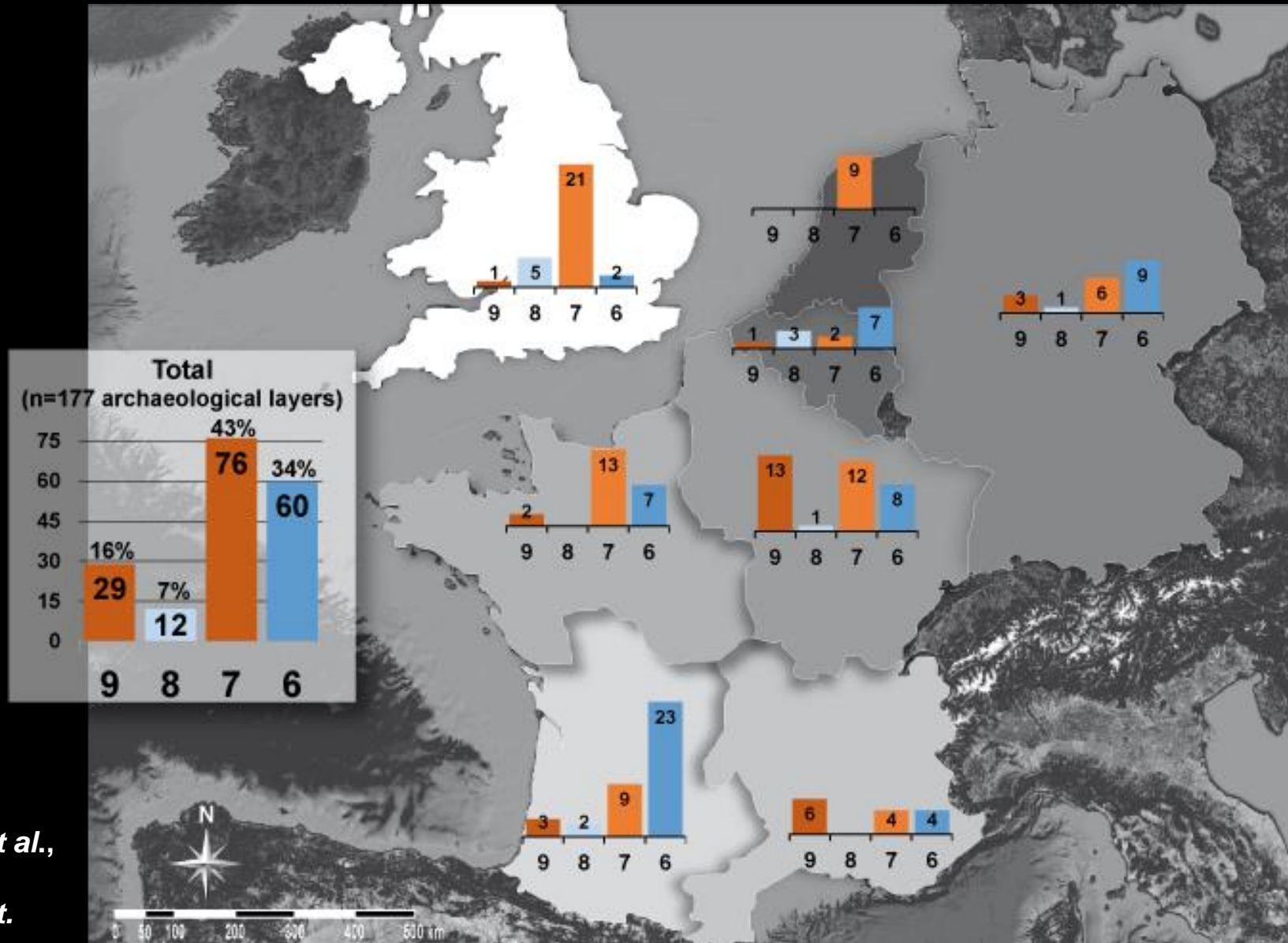
M. Brenet,
D. Cliquet,
M.-H. Moncel,
J. Richter,
B. Scott,
A. Van Baelen,
K. Di Modica,
D. De Loecker,
N. Ashton,
L. Bourguignon,
A. Delagnes,
J.-P. Faivre,
M. Folgado-Lopez,
J.-L. Locht,
M. Pope,
J.-P. Raynal,
W. Roebroeks,
C. Santagata,
A. Turq,
P. Van Peer



Hérisson *et al.*,
2016
Quat. Int.

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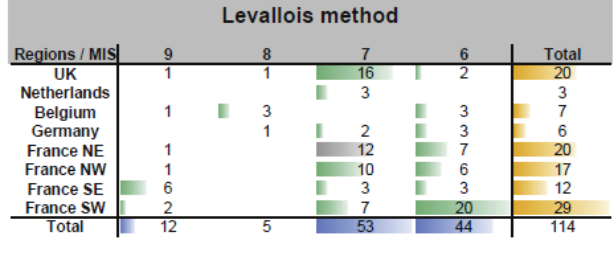
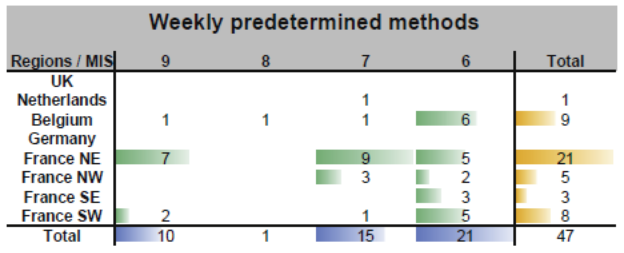
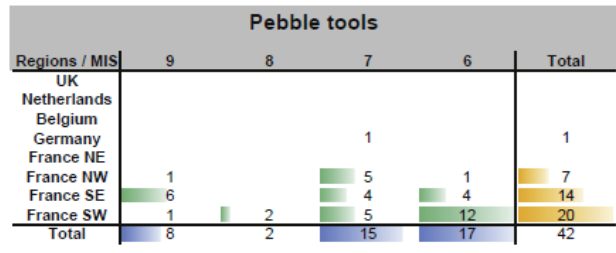
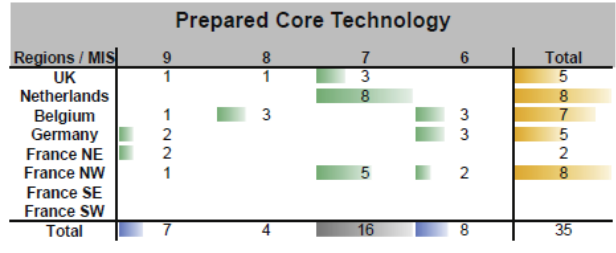
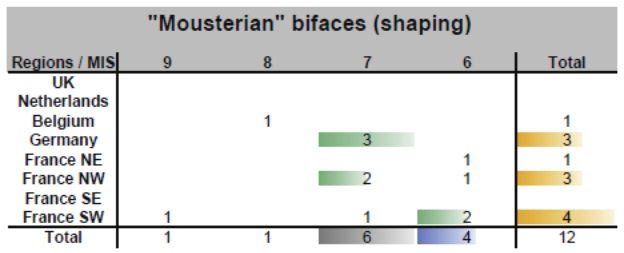
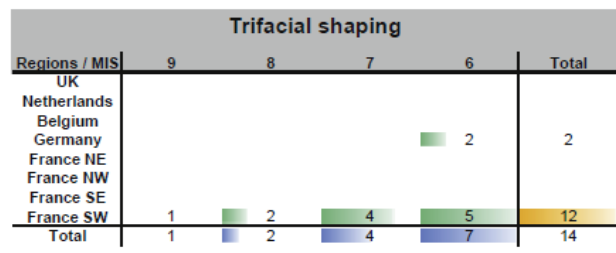
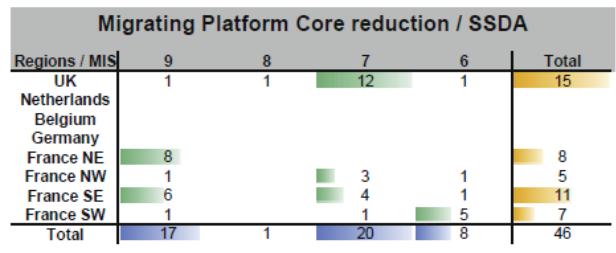
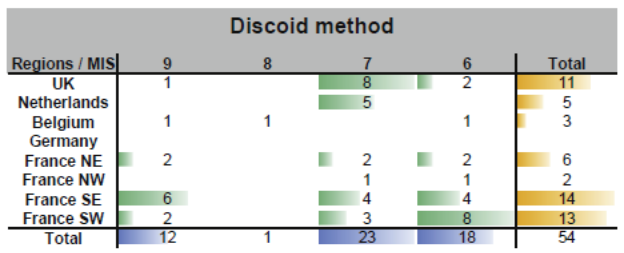
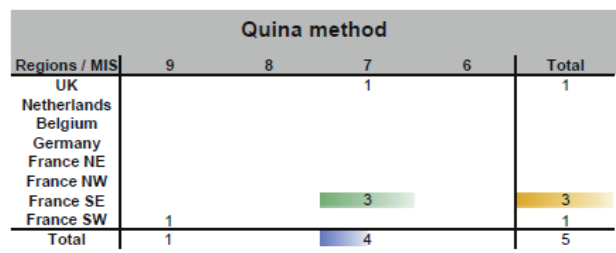
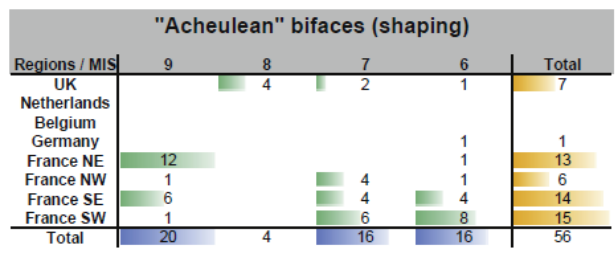
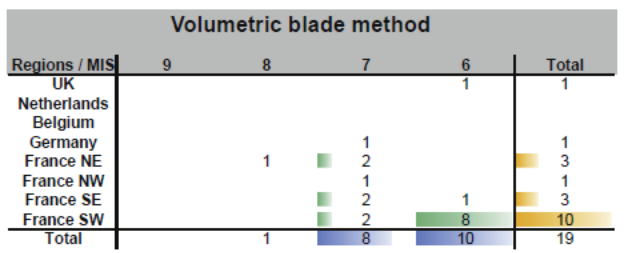
177 archaeological layers with a good chronological framework



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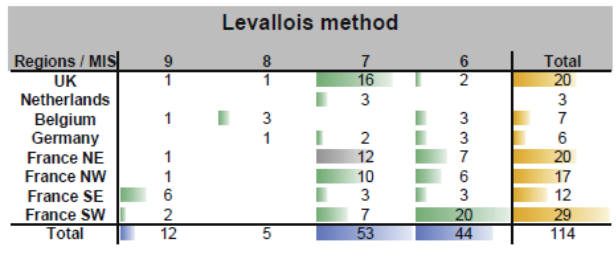
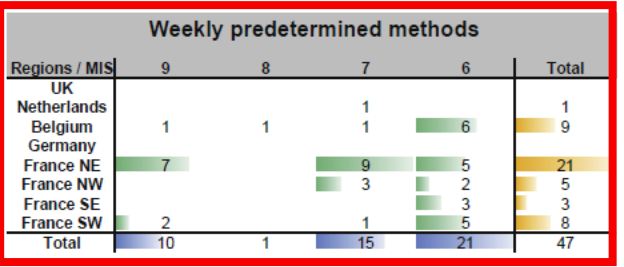
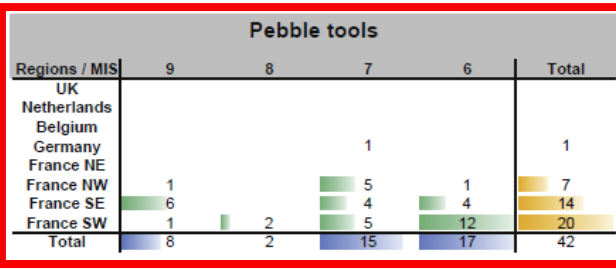
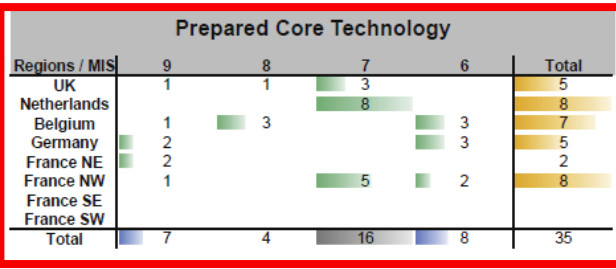
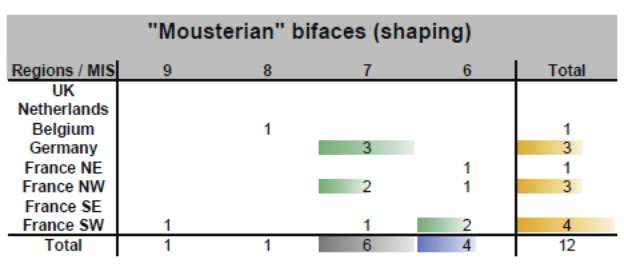
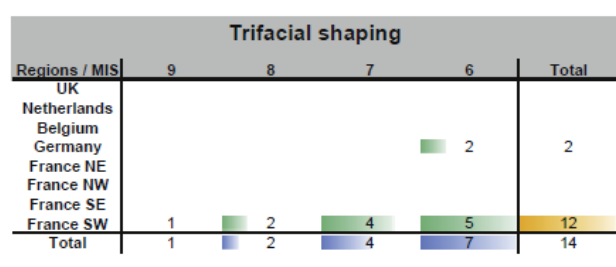
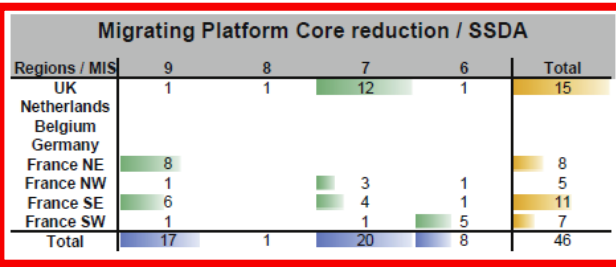
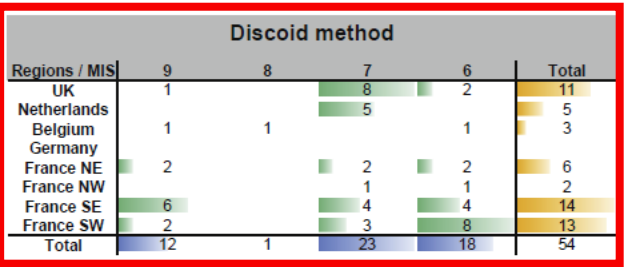
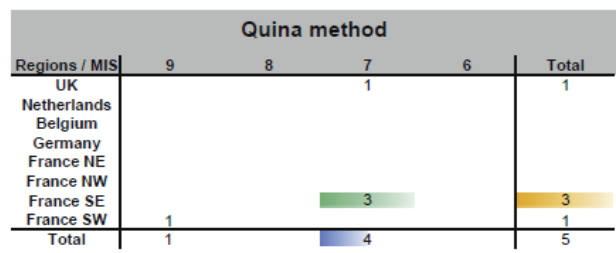
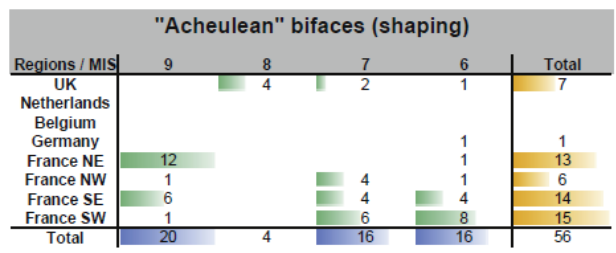
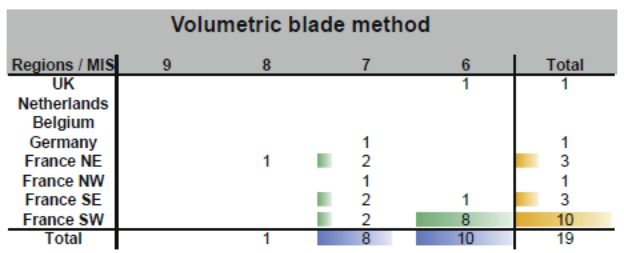
! Some limits !



Hérisson et al., 2016 *Quat. Int.*

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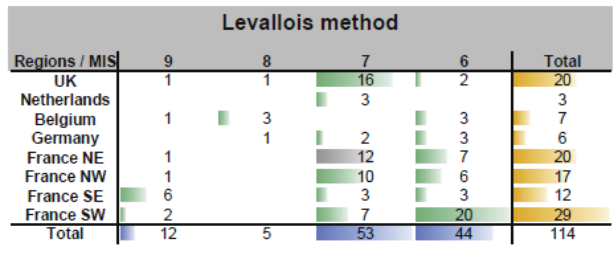
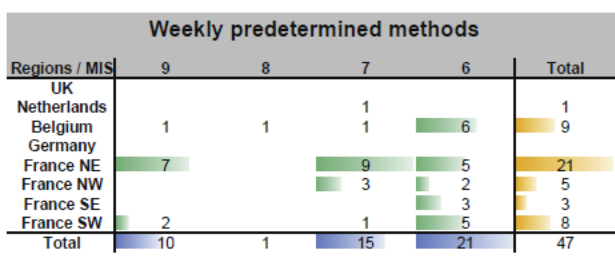
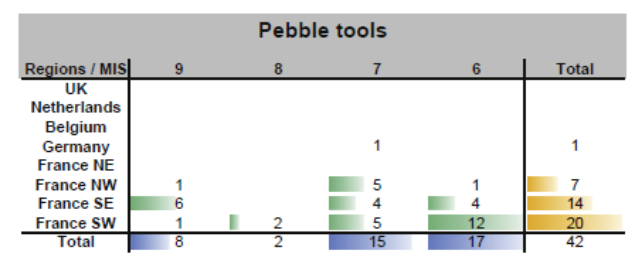
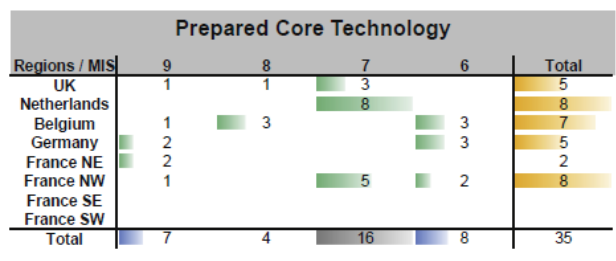
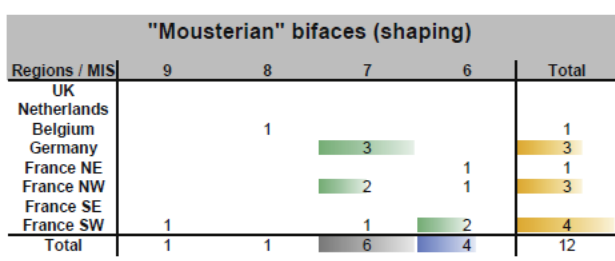
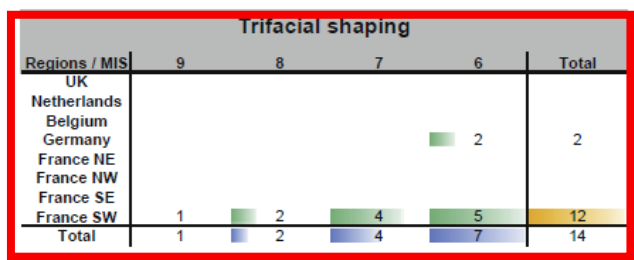
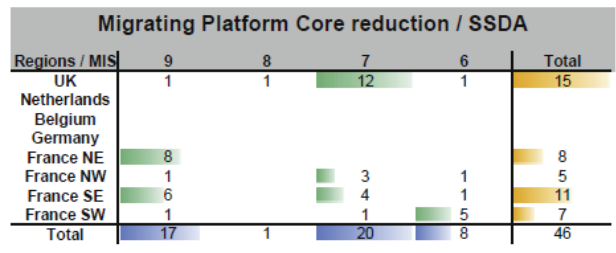
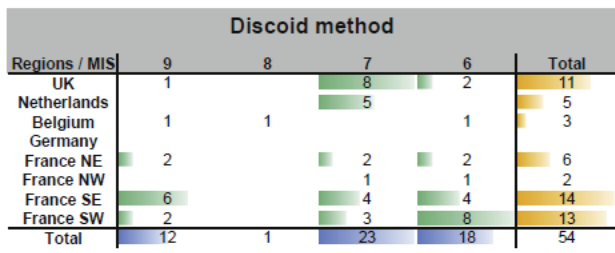
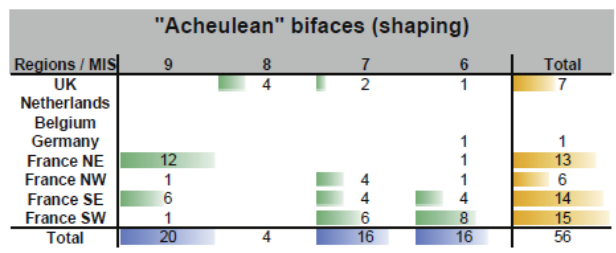
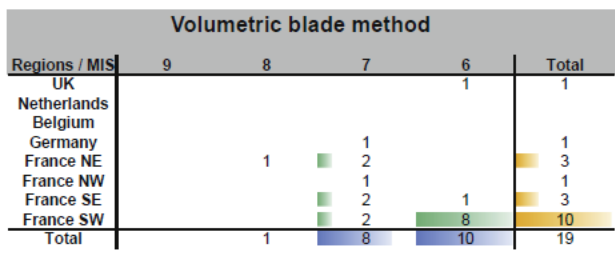
No or little changes



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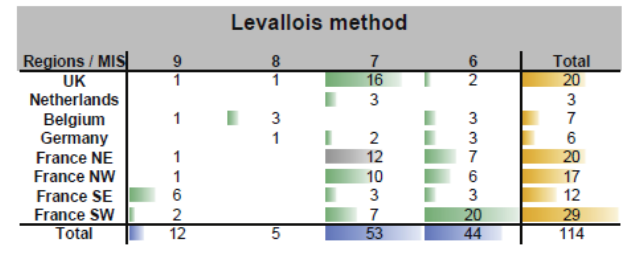
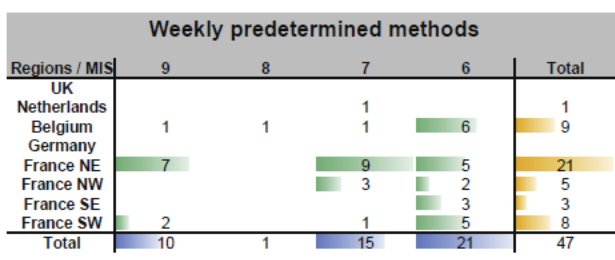
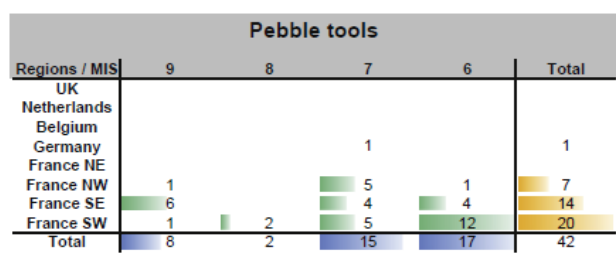
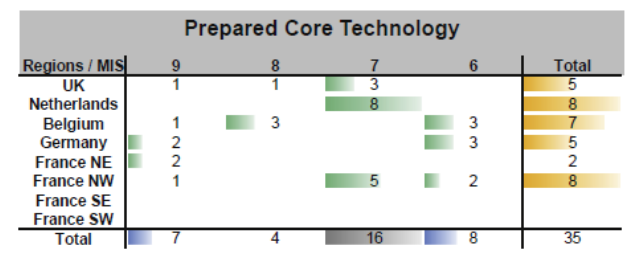
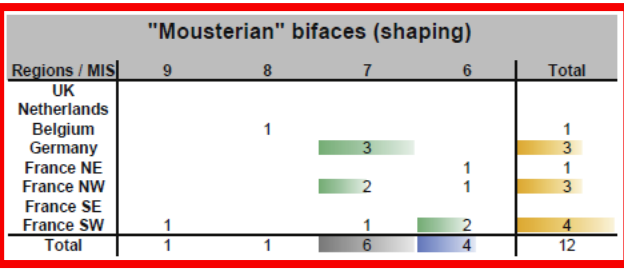
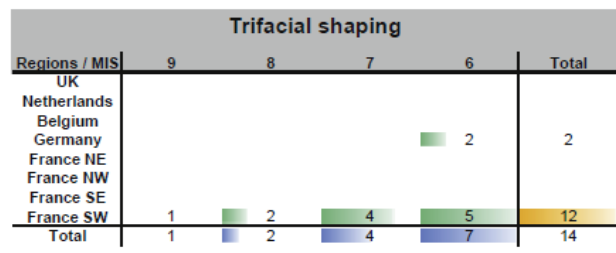
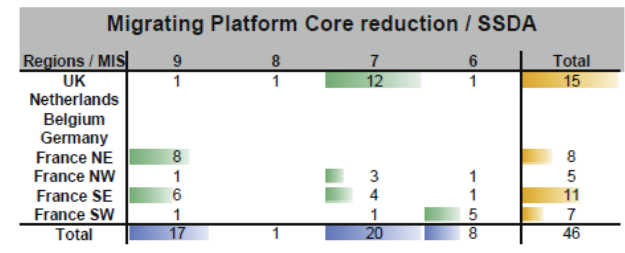
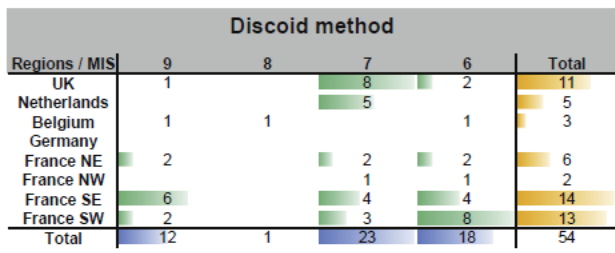
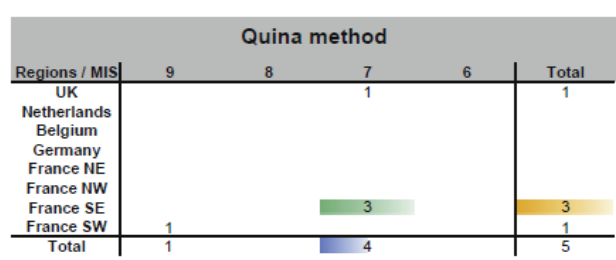
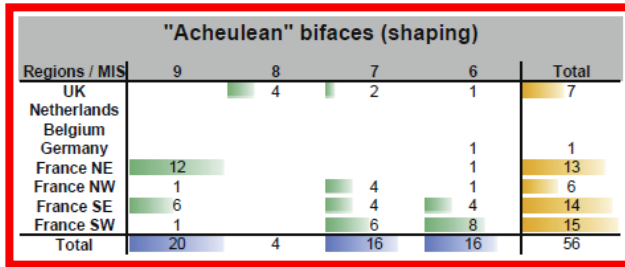
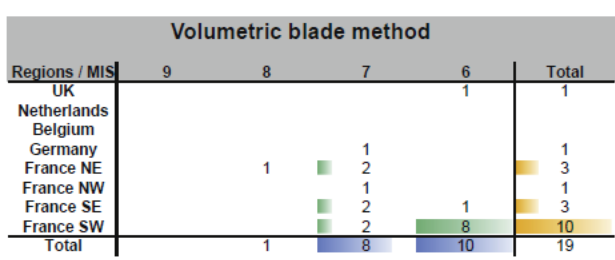
Local or marginal changes



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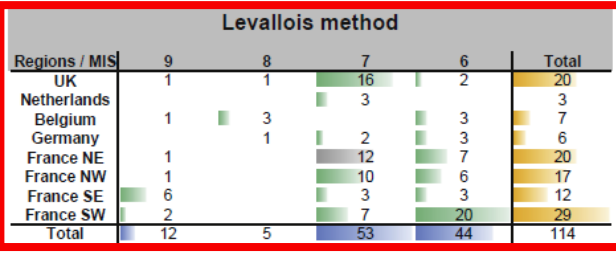
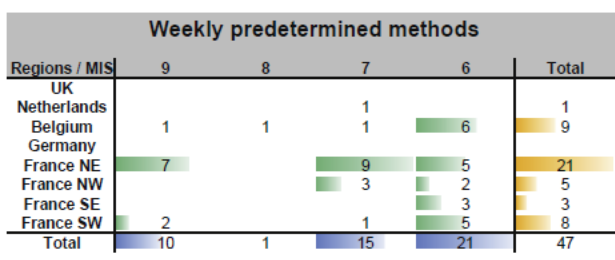
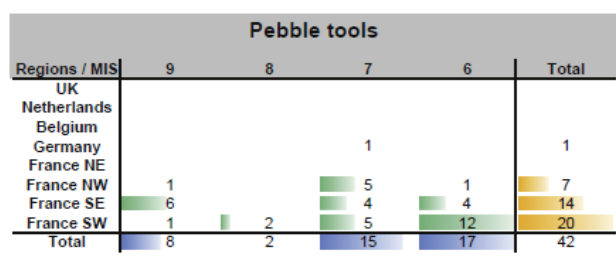
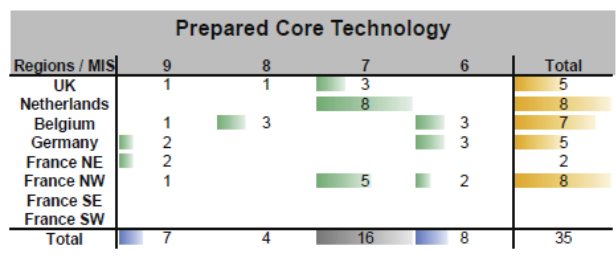
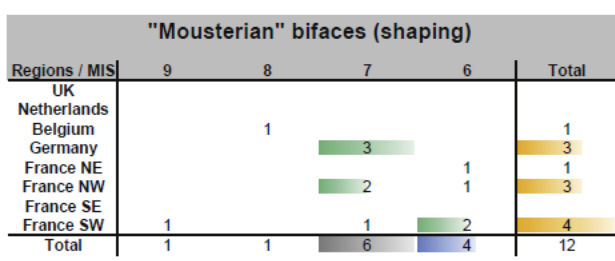
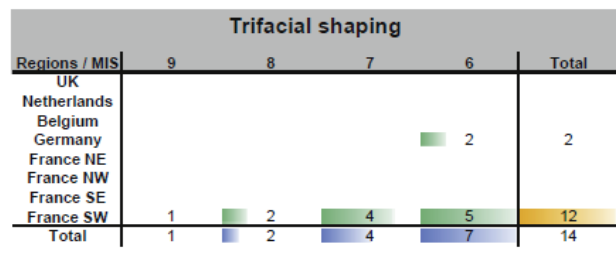
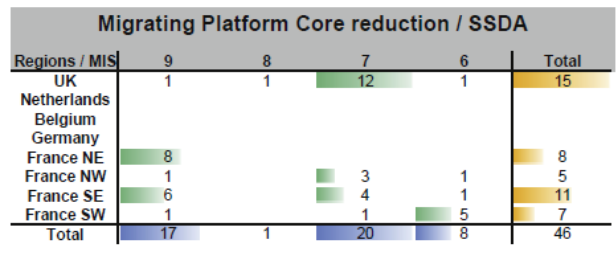
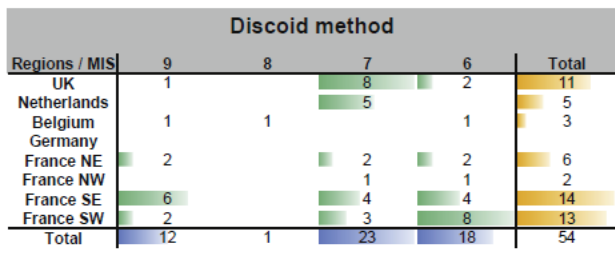
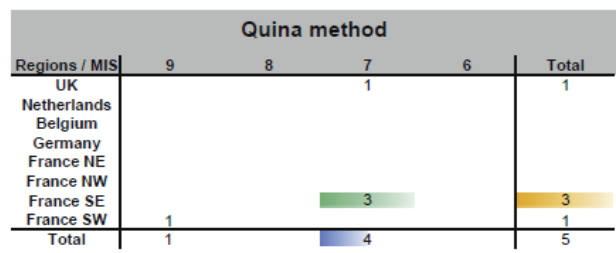
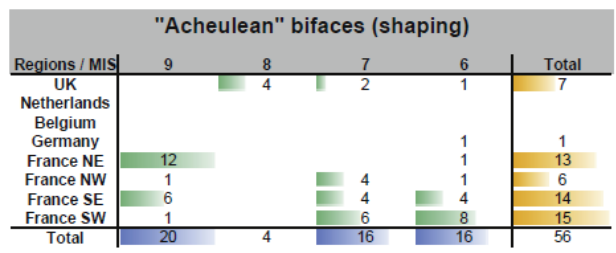
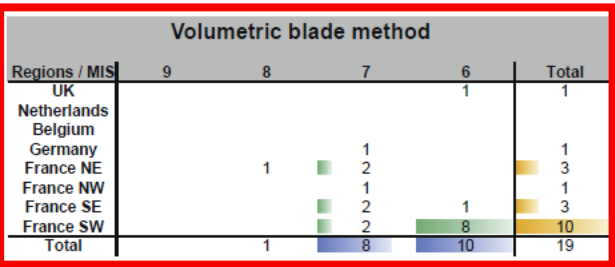
Main or/and significant changes



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Main or/and significant changes



Hérisson et al., 2016 *Quat. Int.*

43% 42% 70% 79%

To sum up

- ✓ **A reliable chronostratigraphic framework**
- ✓ **The record is clearly linked to the climatic and environmental changes**
 - ✓ **The Saalian archaeological record is both rich and scarce**
 - ✓ **Practically all sites are open-air sites in NW Europe**
 - ✓ **Recent view of the sites reference and new sites**
- ✓ **Lower Palaeolithic/Middle Palaeolithic is not just Levallois or biface question**
 - ✓ **Progressive changes and shift MIS 9/8 (280-250 ka)**

To go further

- **Reviewing the « Epi-Acheuléen » collections and sequences (dating, typology...)**
- **Finding new sites if any for the pleniglacial phases of the MIS 8 and 6**
- **Working on the flaking methods called PCR or weekly predetermined**



Thank you for your attention