
New insight on the chronostratigraphic background of the Middle Pleistocene terraces of the Haine Basin (Belgium), ascribing the Middle Palaeolithic industry of Mesvin IV to MIS 10, around 350 ka

Paul Haesaerts^{*1,2}, Christian Dupuis, Sanda Balescu[†], Paolo Spagna[‡], Freddy Damblon, Stéphane Pirson[§], Ivan Jadin, and Dominique Bosquet[¶]

¹IRSNB – Belgique

²Institut Royal des Sciences Naturelles de Belgique (IRSNB) – Belgique

Résumé

The Middle Pleistocene fluvial deposits on the southern edge of the Haine Basin close to Mons (Belgium), incorporate four alluvial terraces associated with Lower and Middle Palaeolithic industries, between 78m (Pa d'la l'iau) and 45m (Héelin quarry). In the seventies, the Mesvin terrace (around 59m) characterized by a well asserted Levallois technology (Mesvin IV), has been ascribed to MIS 8, based on elevation, biostratigraphic and chronological arguments; in the same way, the Petit-Spiennes terrace (at 68 m) with Middle Acheulean and early Levallois technology was related to MIS 10. However, new data collected in recent years for the cover deposits of the Haine sequence and the occurrence of a complementary terrace at 50m between Hélin and Mesvin, led to somewhat improve the chronological framework of the terrace system. They are placing the gravels of the Petit-Spiennes and Mesvin terraces and with the Levallois assemblages they contain, respectively to at 450 ka (MIS 120) and 350 ka (MIS 10). Furthermore this new scheme occurs in good agreement with the sequence of the Somme and the loess cover of Ariendorf along in the Rhine valley, where the Holsteinian is well positioned in MIS 11 (around 400 ka) and points to a long Saalian from MIS 10 to MIS 6. In this way, the loess palaeosol records related to these terrace systems occur as a reference for the chronostratigraphic and environmental background of the Middle Palaeolithic industries in N.W. Europe.

Mots-Clés: Haine terraces Belgium Mesvin iV MIS 10 Middle Palaeolithic

*Intervenant

[†]Auteur correspondant: sanda.balescu@univ-lille1.fr

[‡]Auteur correspondant: pspagna@naturalsciences.be

[§]Auteur correspondant: stephane.pirson@spw.wallonie.be

[¶]Auteur correspondant: dominique.bosquet@spw.wallonie.be