



EVOLUTION TARDIGLACIAIRE ET HOLOCÈNE DES SOLS D'UN BASSIN VERSANT DE MOYENNE MONTAGNE LE LAC DE LA THUILE (MASSIF DES BAUGES)

IMPACTS CLIMATIQUES ET ANTHROPIQUES



BAJARD Manon¹, SABATIER Pierre¹, POULENARD Jérôme¹, DAVID Fernand², ARNAUD Fabien¹, DEVELLE Anne-Lise¹, LELOUP-BESSON Anouk¹, REYSS Jean-Louis³, FANGET Bernard¹, MALET Emmanuel¹, ARNAUD Daniel⁴, AUGUSTIN Laurent⁴, CROUZET Christian⁵

1 : EDYTEM, Université de Savoie, CNRS, bat. pôle montagne, 73376 Le Bourget du Lac, manon.bajard@gmail.com.

2 : CEREGE, Aix-Marseille Univ, CNRS, IRD, Collège de France, Europôle de l'Arbois, BP 80 13545 Aix en Provence.

3 : LSCE, UVSQ, CNRS, CEA, avenue de la Terrasse, 91110 Gif-sur-Yvette.

4 : Division technique de l'INSU, Centre de Carottage et de Forage National, CNRS, 83507 La Seyne-sur-mer

5 : ISTERre, Université de Savoie, CNRS, bat. Belledonne, 73376 Le Bourget-du-Lac.

1909

1016 – Lac de la Thuile (Savoie) et Galoppaz
(1.686 m d'altitude)

E. REYNAUD
EDITEUR
CHAMBERY



Modification de
l'occupation du sol



Evolution des sols

Homme/Climat

Evolution ?

Résilience ?

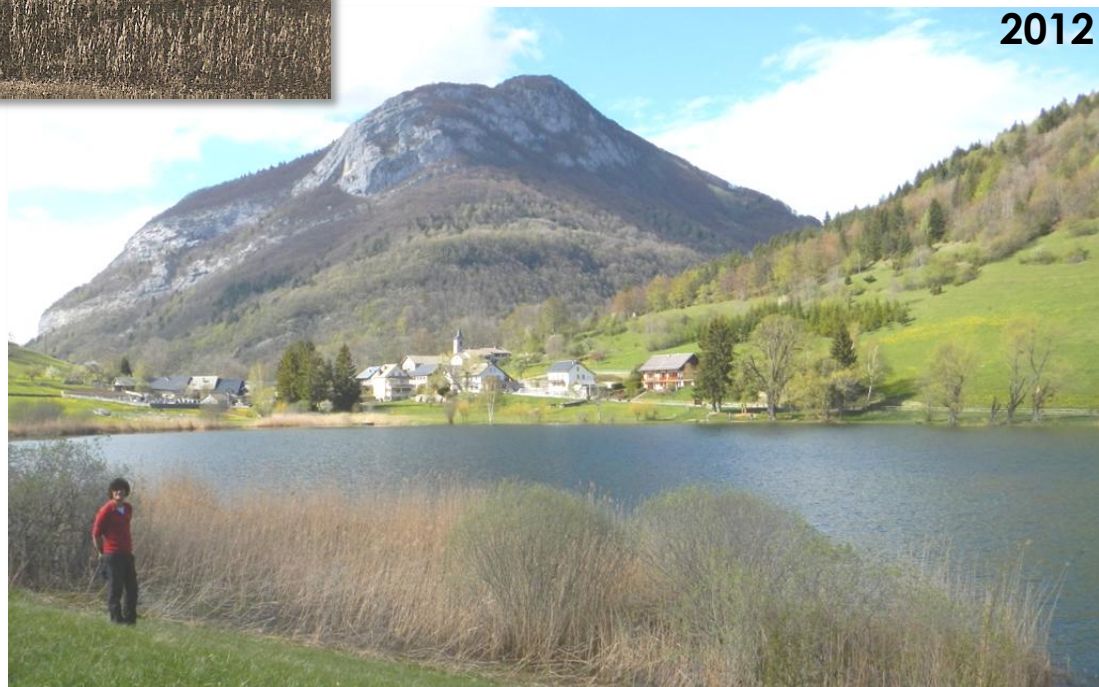
Objectif

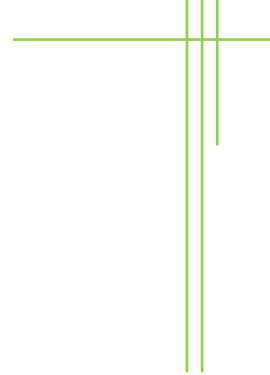
Reconstitution des
trajectoires d'évolution
des sols

Outils

Approche paléo-
environnementale : les
sédiments du lac

2012

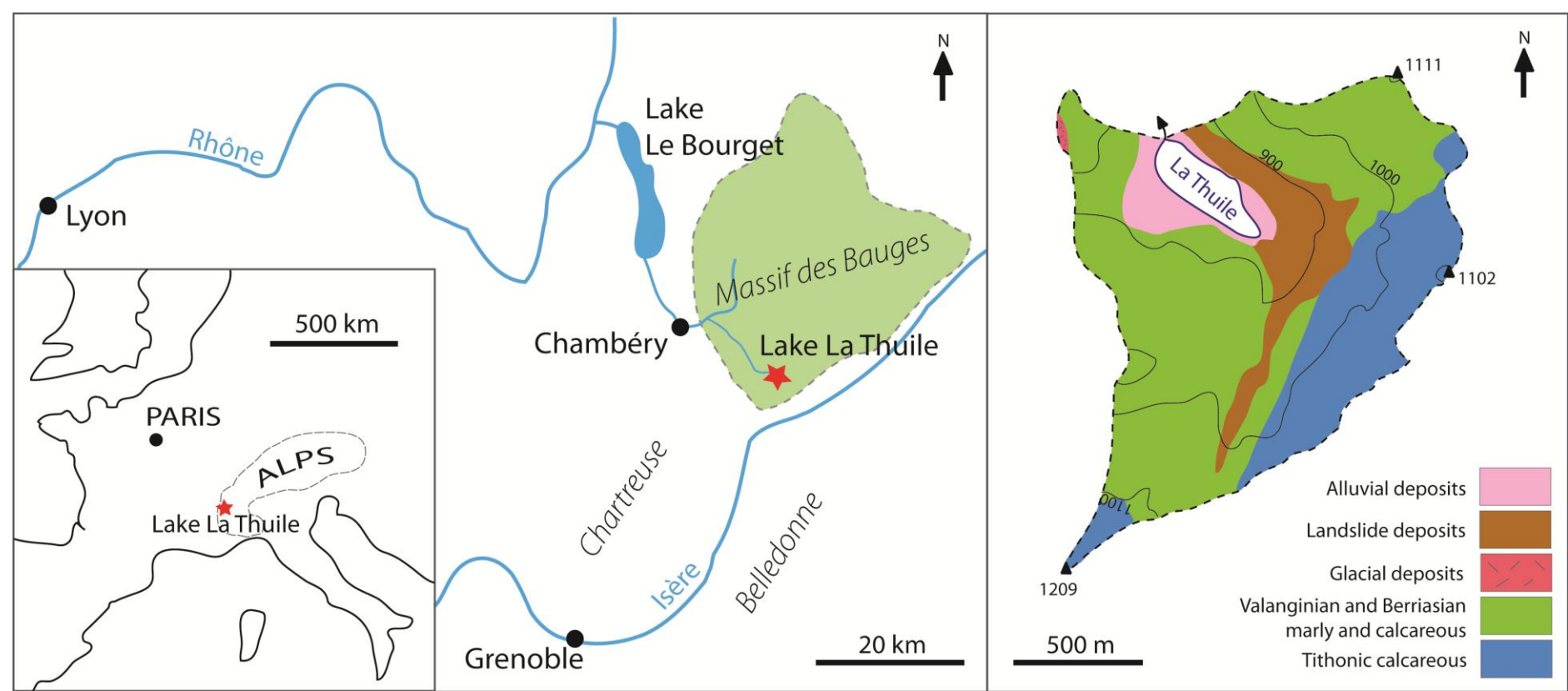




Matériel et méthodes



Localisation et géologie du BV du Lac de La Thuile (Massif des Bauges)



Superficie du lac : 0,06km²
Superficie du BV : 1,6km²
Altitude : 870-1200 m

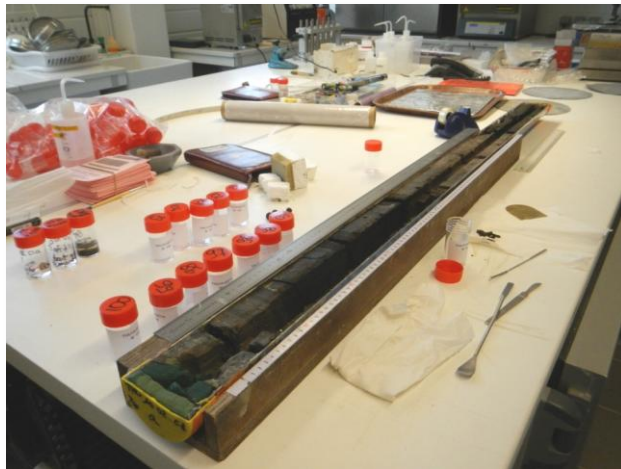
=> Bassin versant carbonaté

Analyses sédimentaires

Carottage

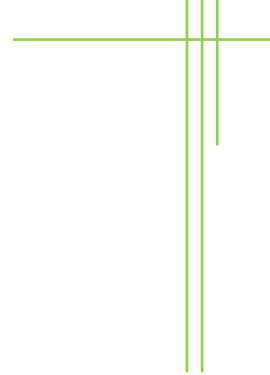


- ✓ Description de la séquence
- ✓ Datation : 15 dates C^{14} , $^{210}Pb/^{137}Cs$, paléomagnétisme
- ✓ Éléments majeurs et traces : en continu, /5 mm XRF Core Scanner (Si, Ti, Al, Fe, Ca, K, Mn, Br, Sr, Rb, Zr)
- ✓ Granulométrie laser : /2 cm
- ✓ $CaCO_3$ et MO : /2 cm, $550^{\circ}C$ puis $950^{\circ}C$
- ✓ Palynologie : /10 cm



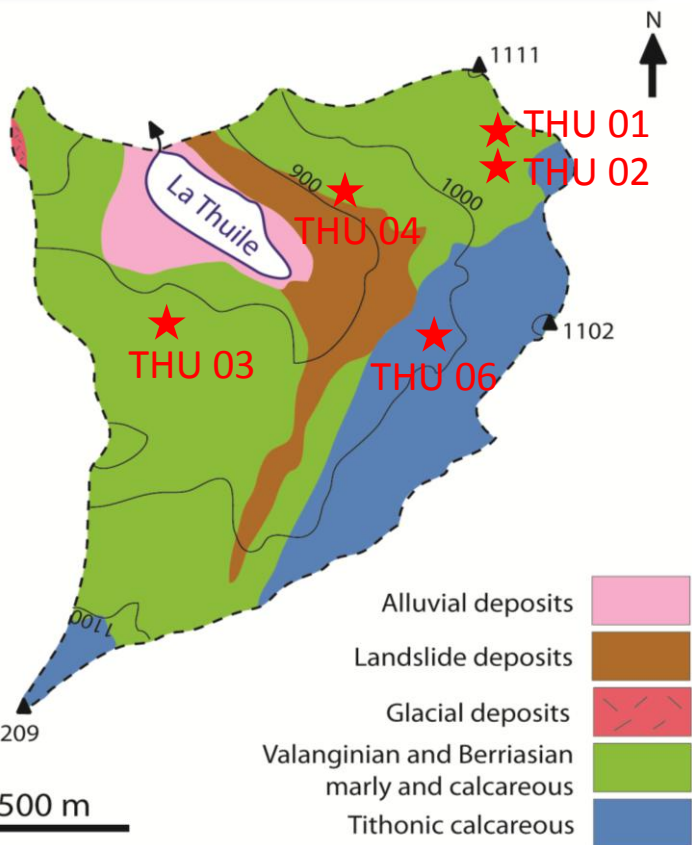
Pédologie

- ✓ Caractérisation des sols : profils + sondage à la tarière

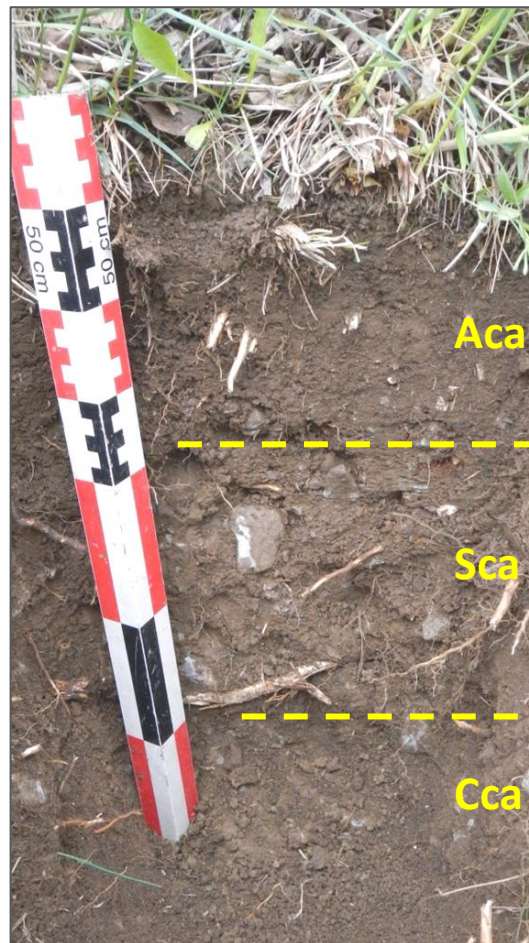


Résultats

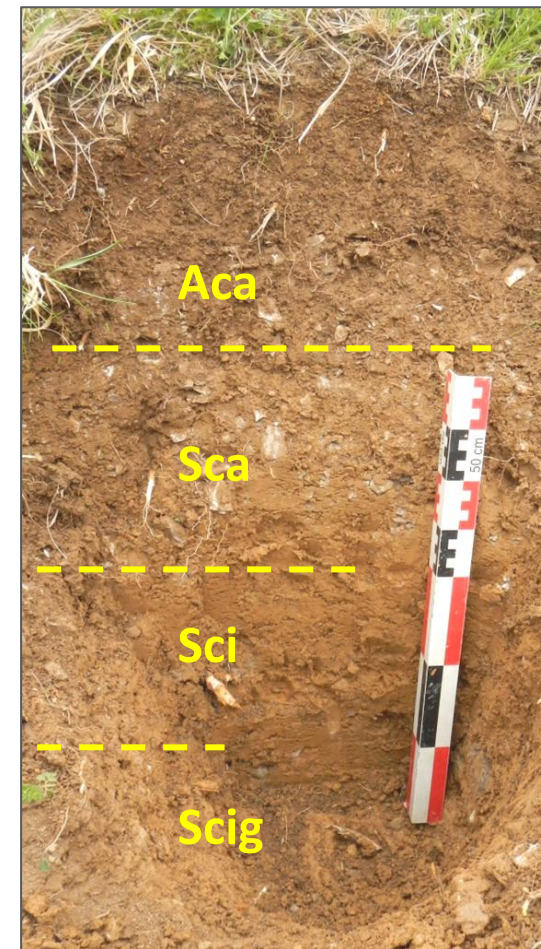




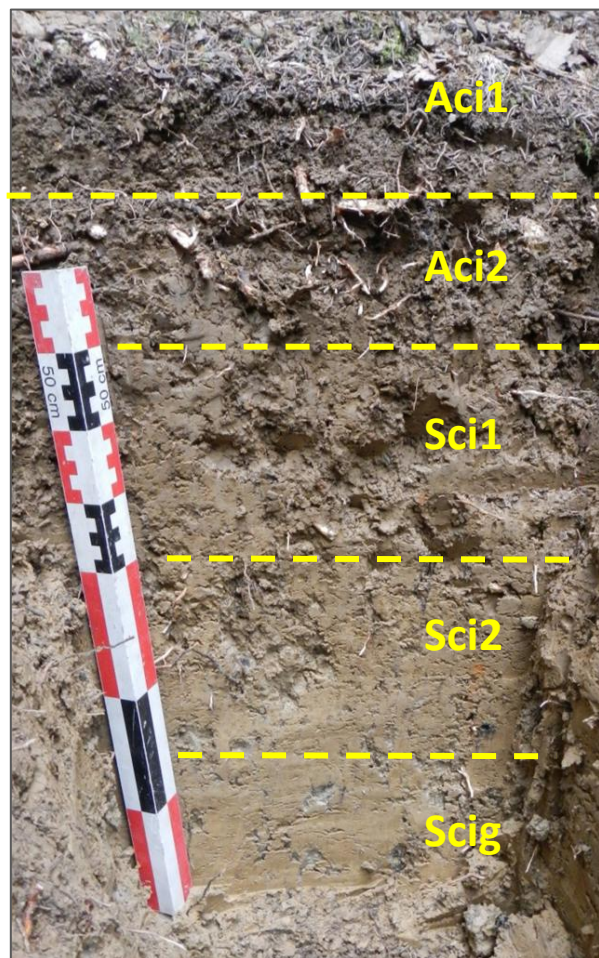
THU 03
CALCOSOLS



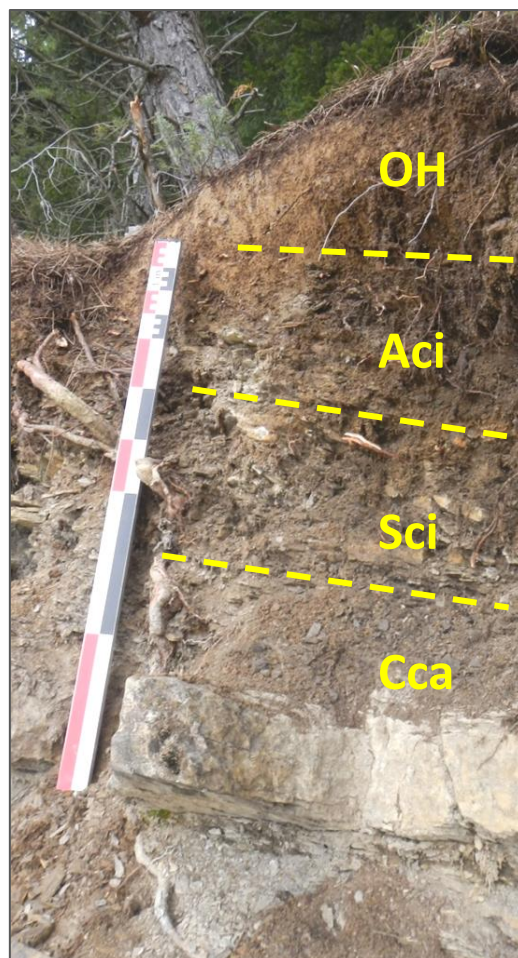
THU 04
COLLUVIOSOLS



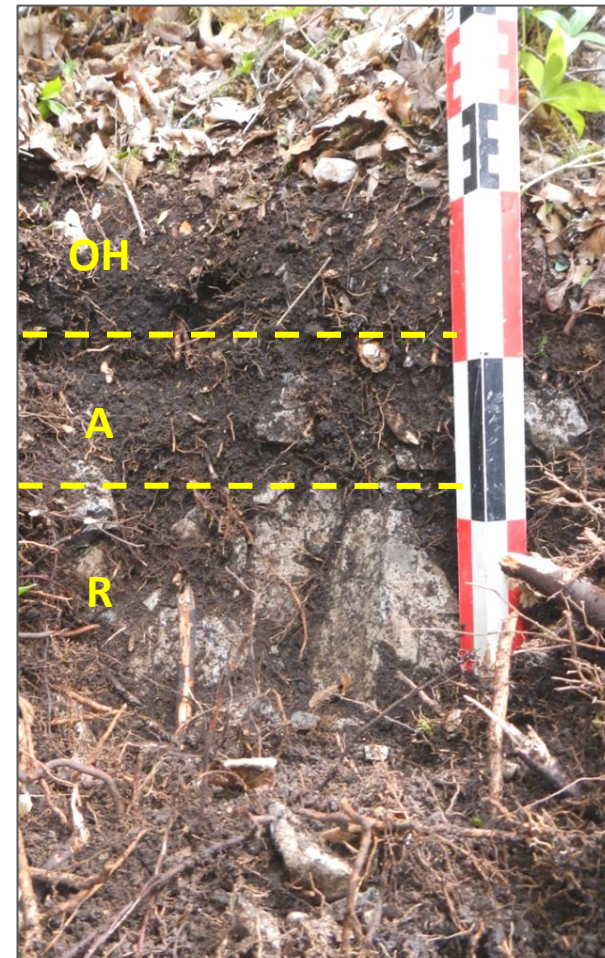
THU 01
BRUNISOL



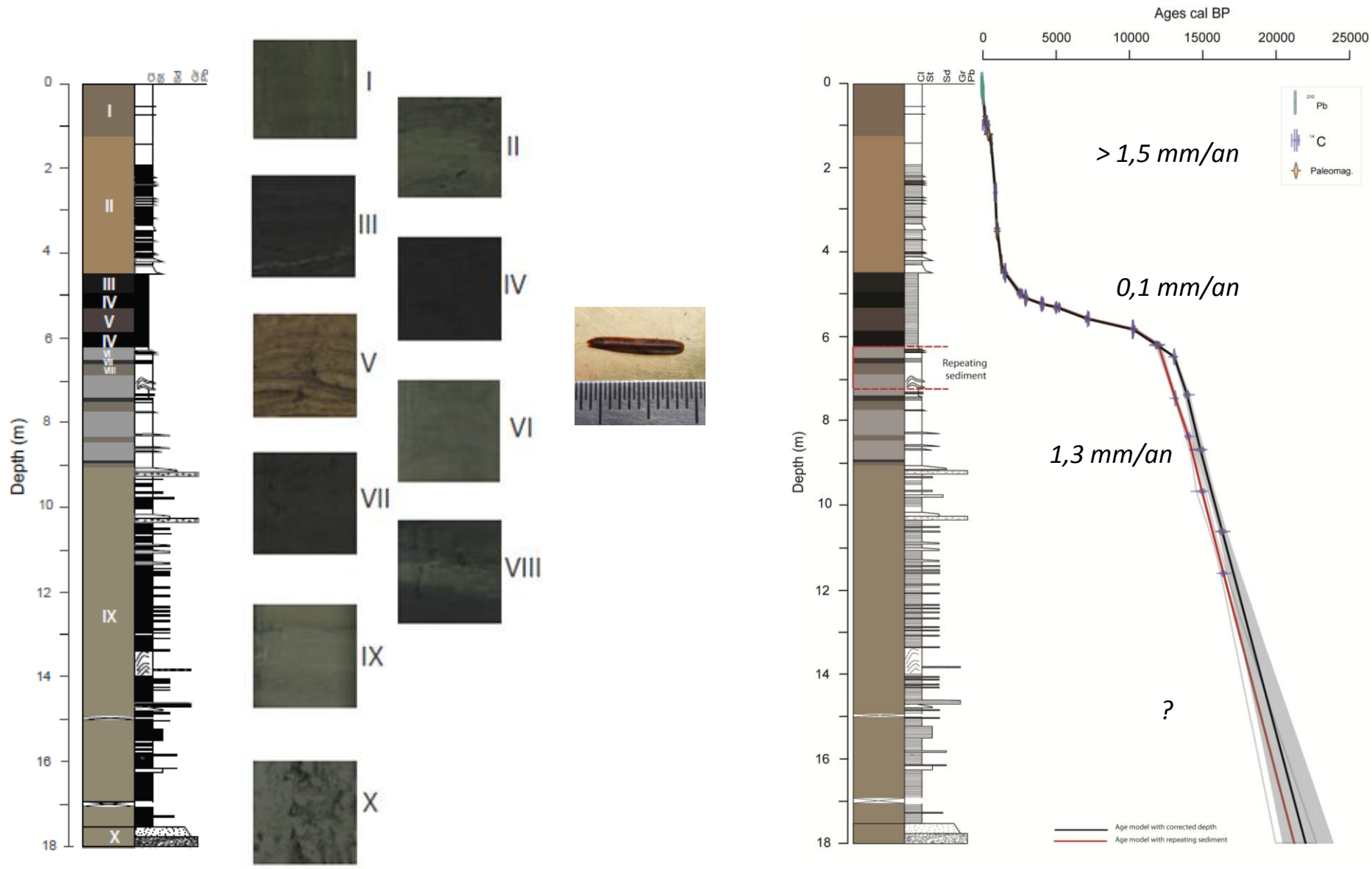
THU 02
CALSI SOL

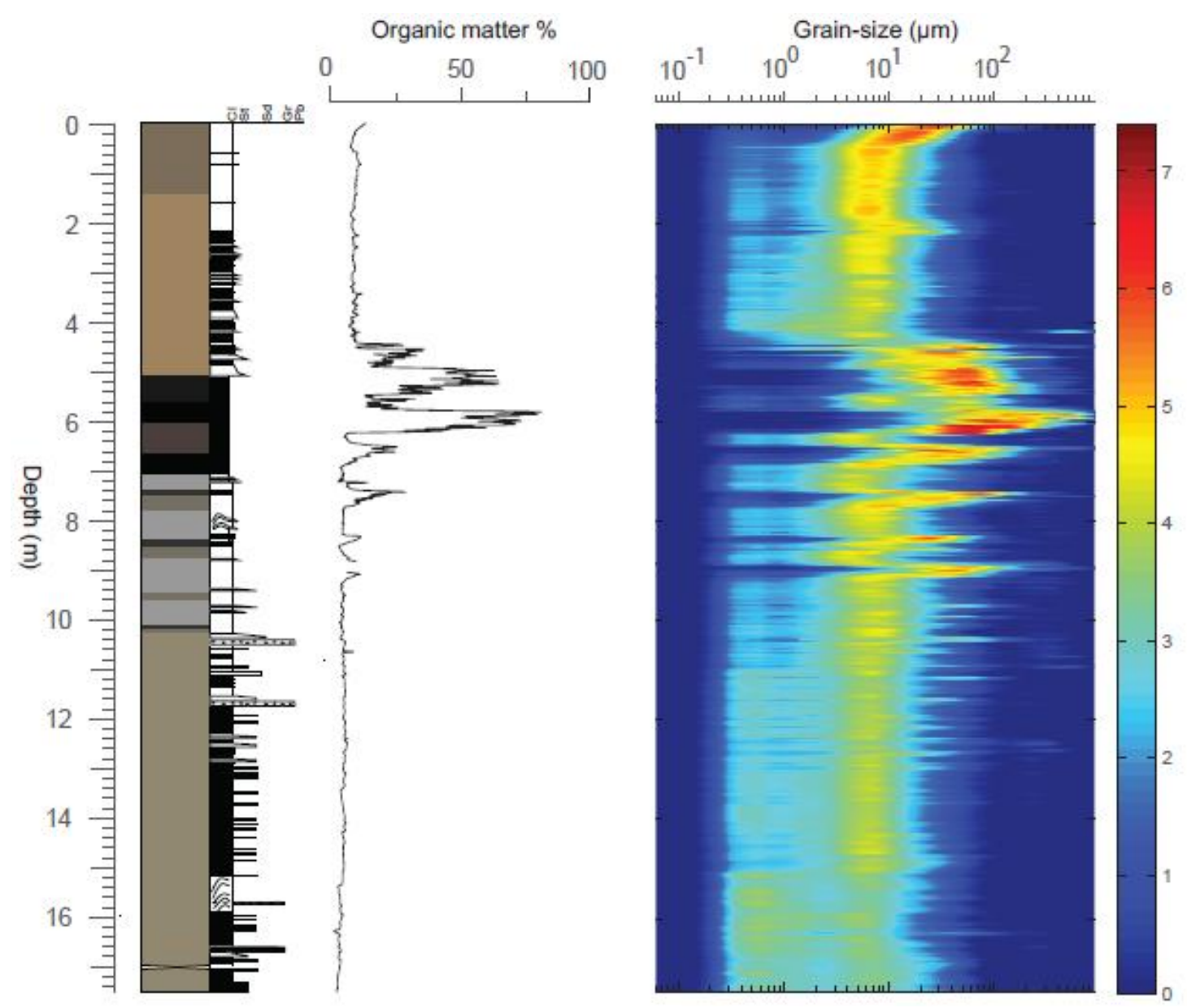


THU 06
ORGANOSOL

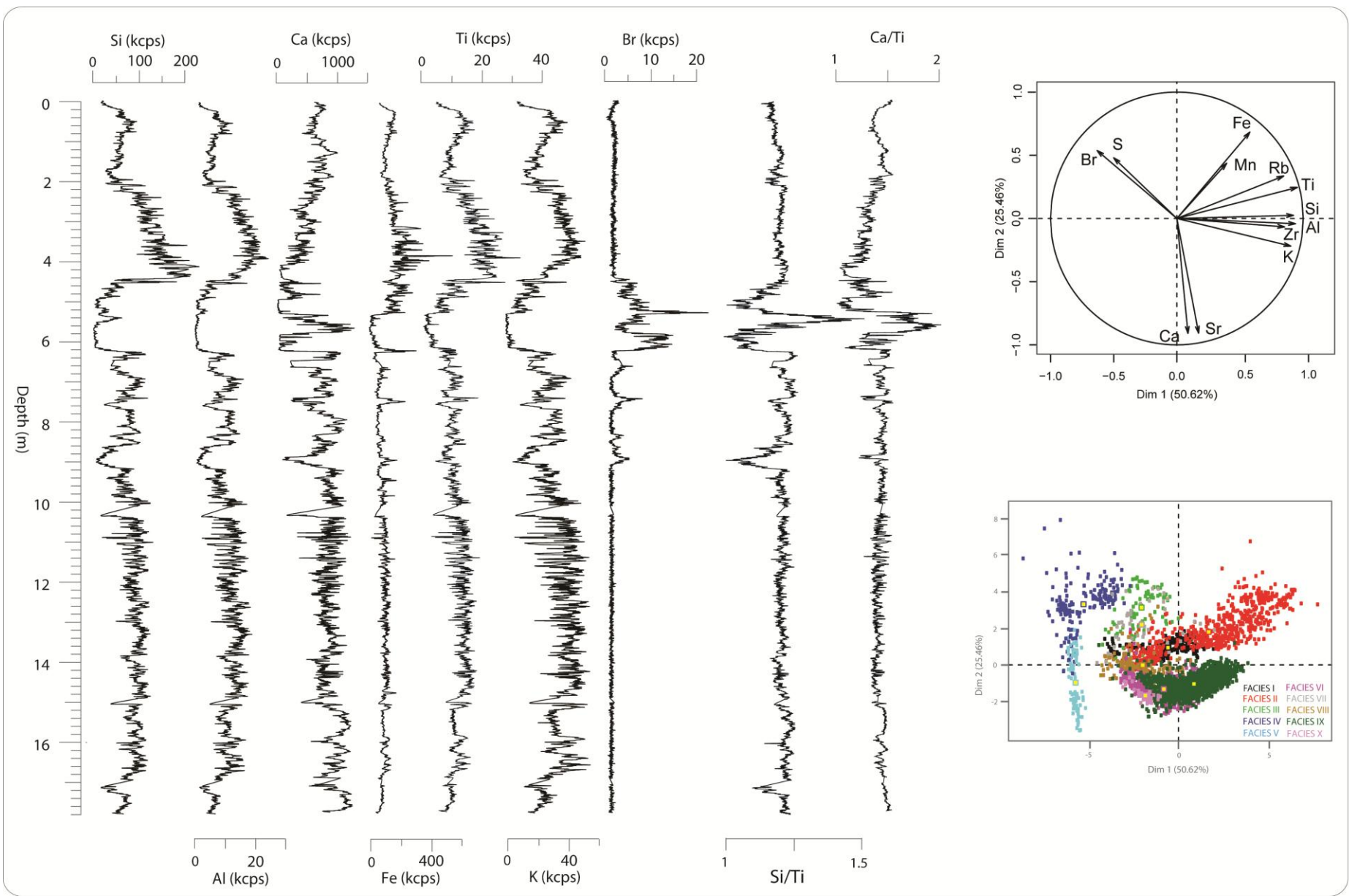


Résultats - les sédiments du lac : description et datation

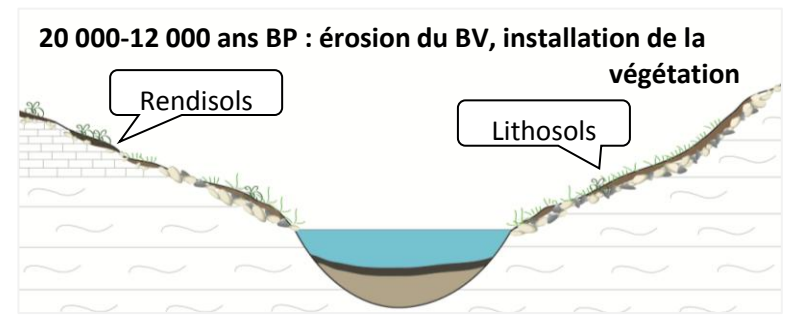
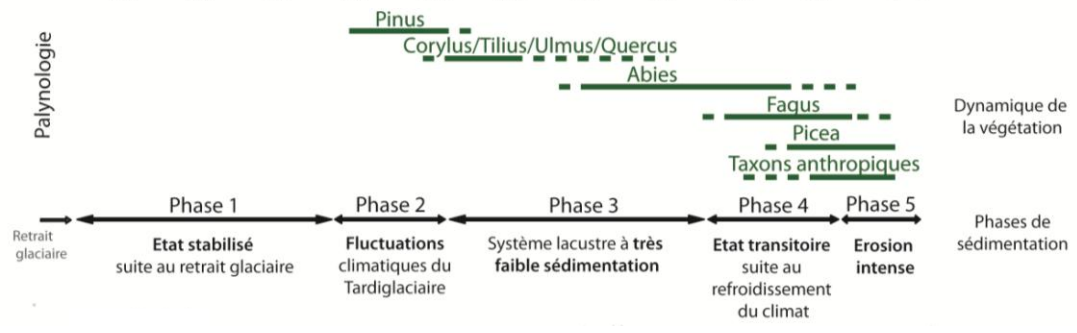
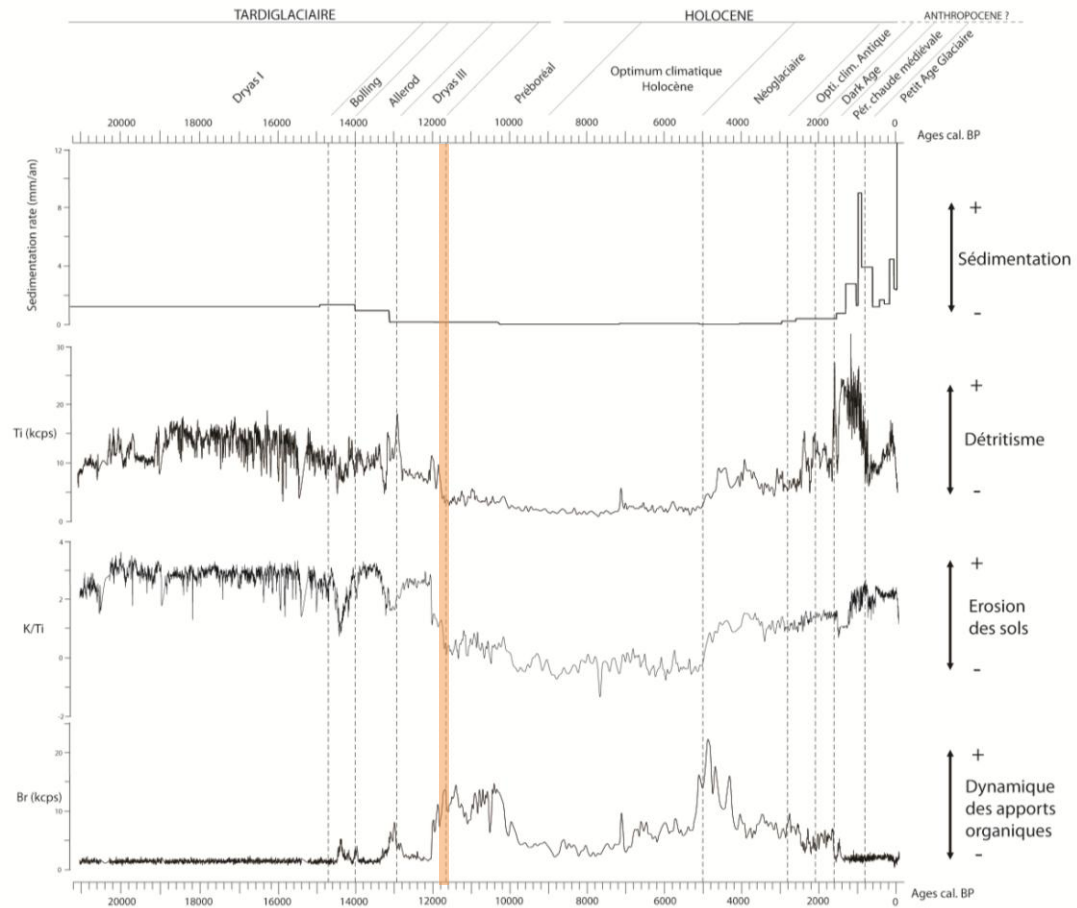




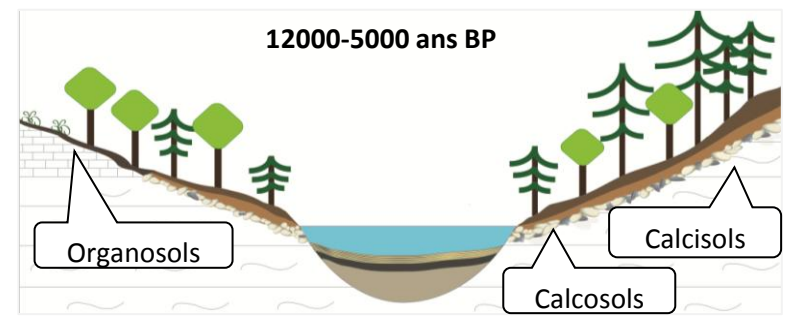
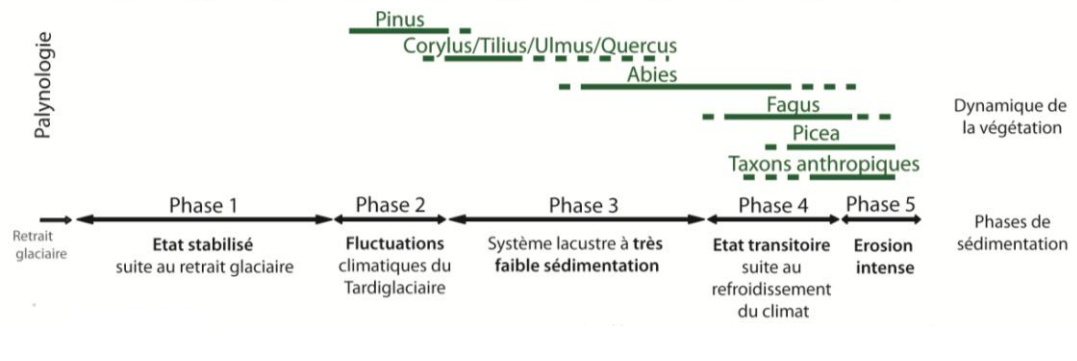
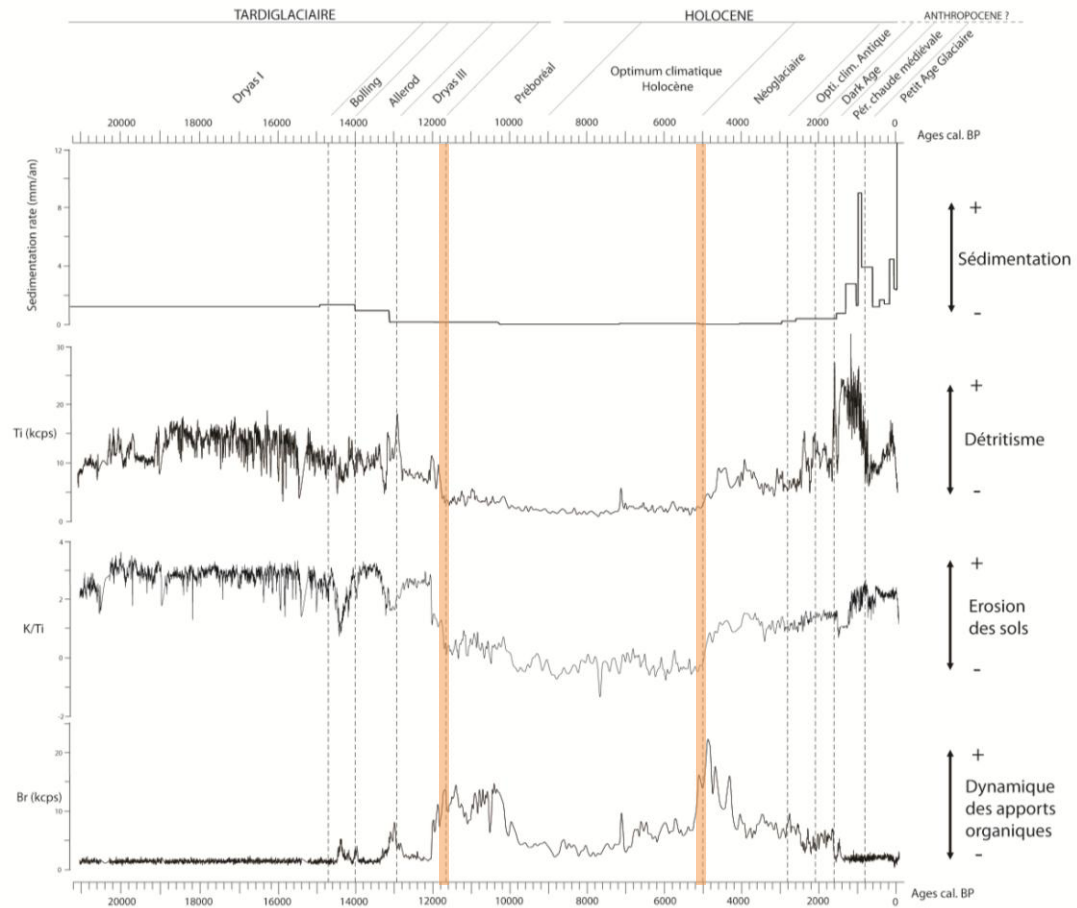
Résultats - les sédiments du lac : géochimie XRF



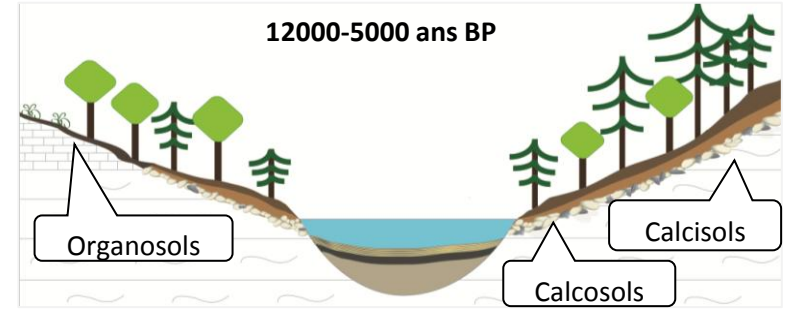
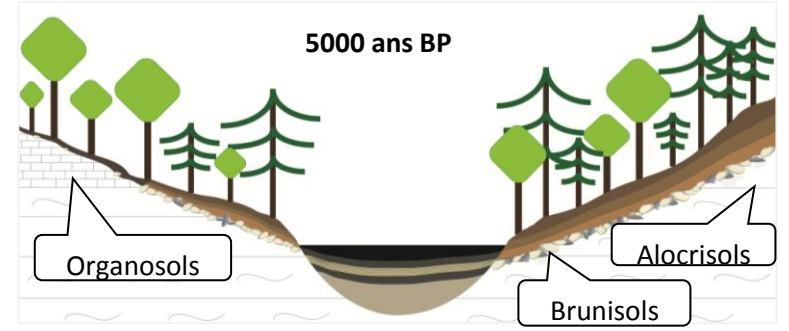
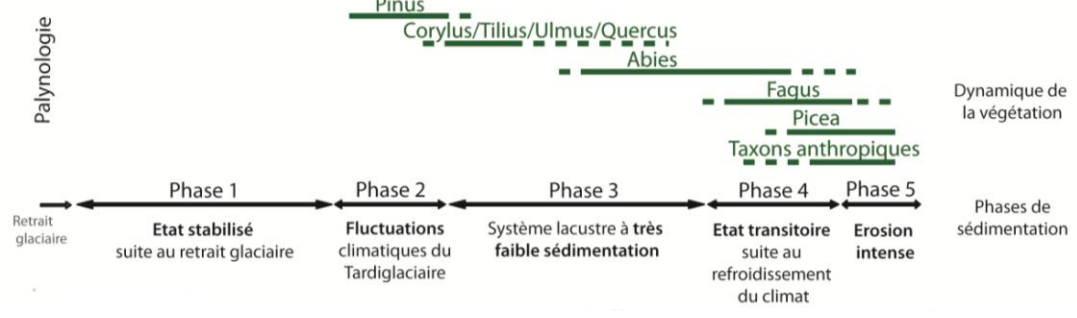
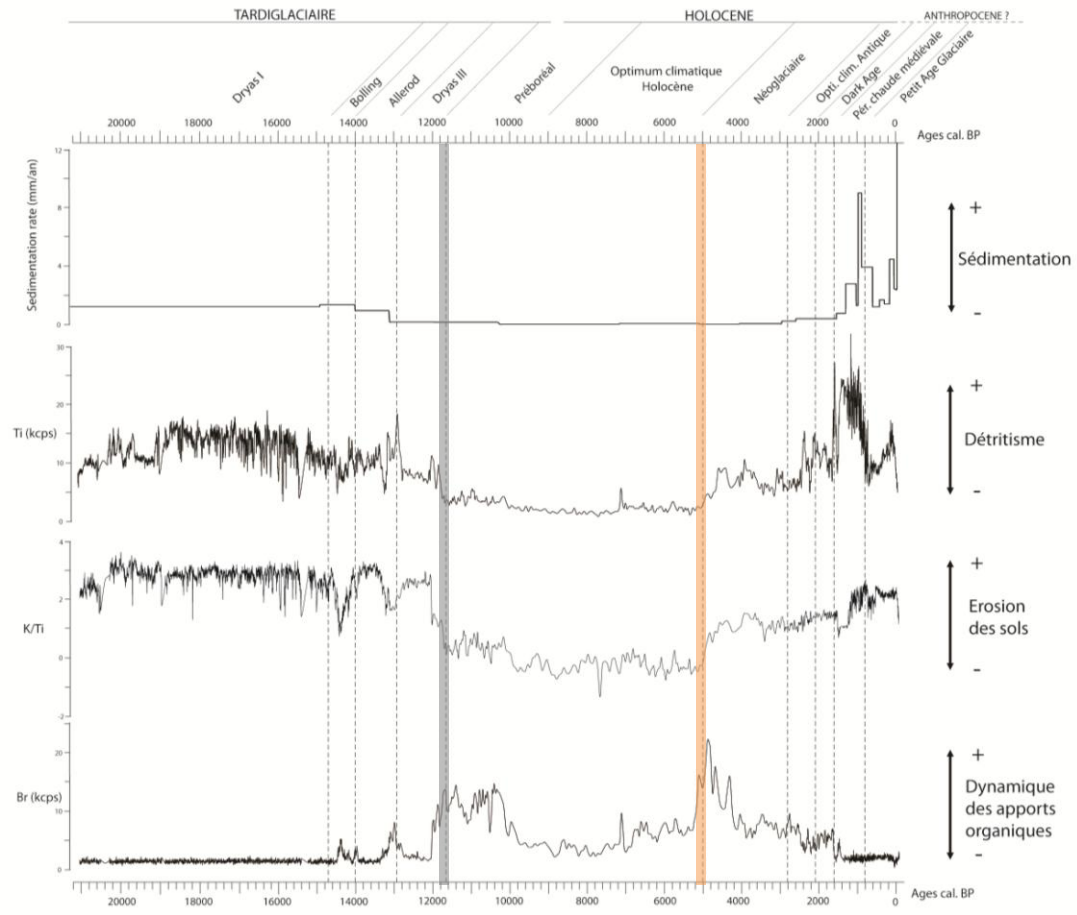
Résultats – synthèse : dynamique du bassin versant du lac de La Thuile



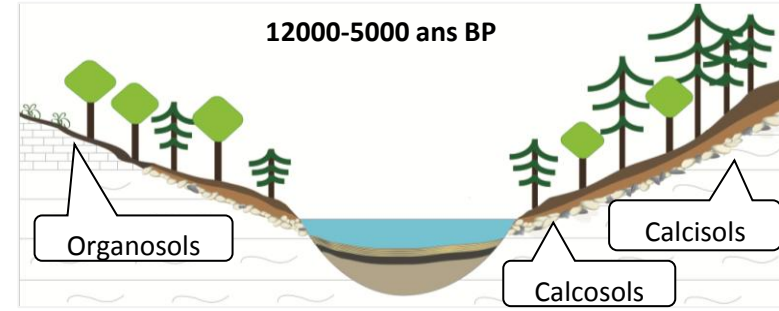
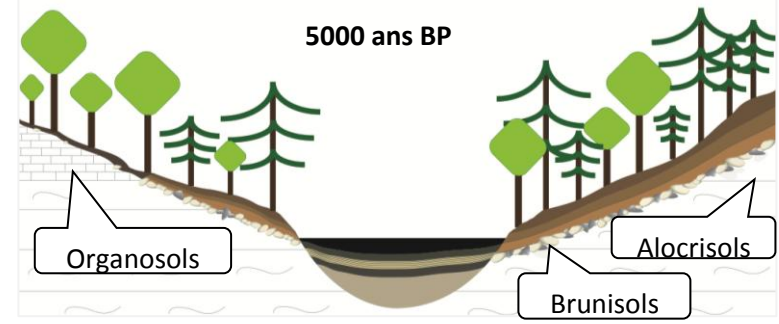
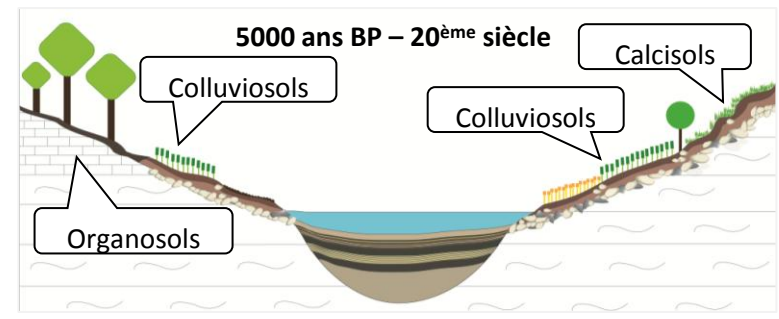
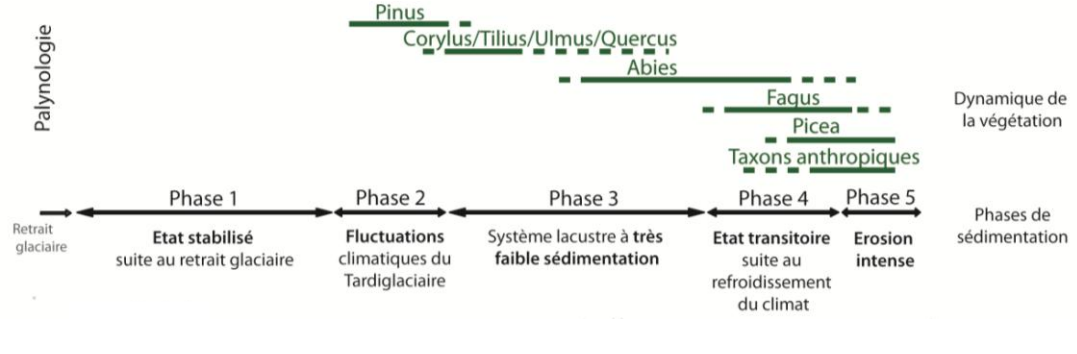
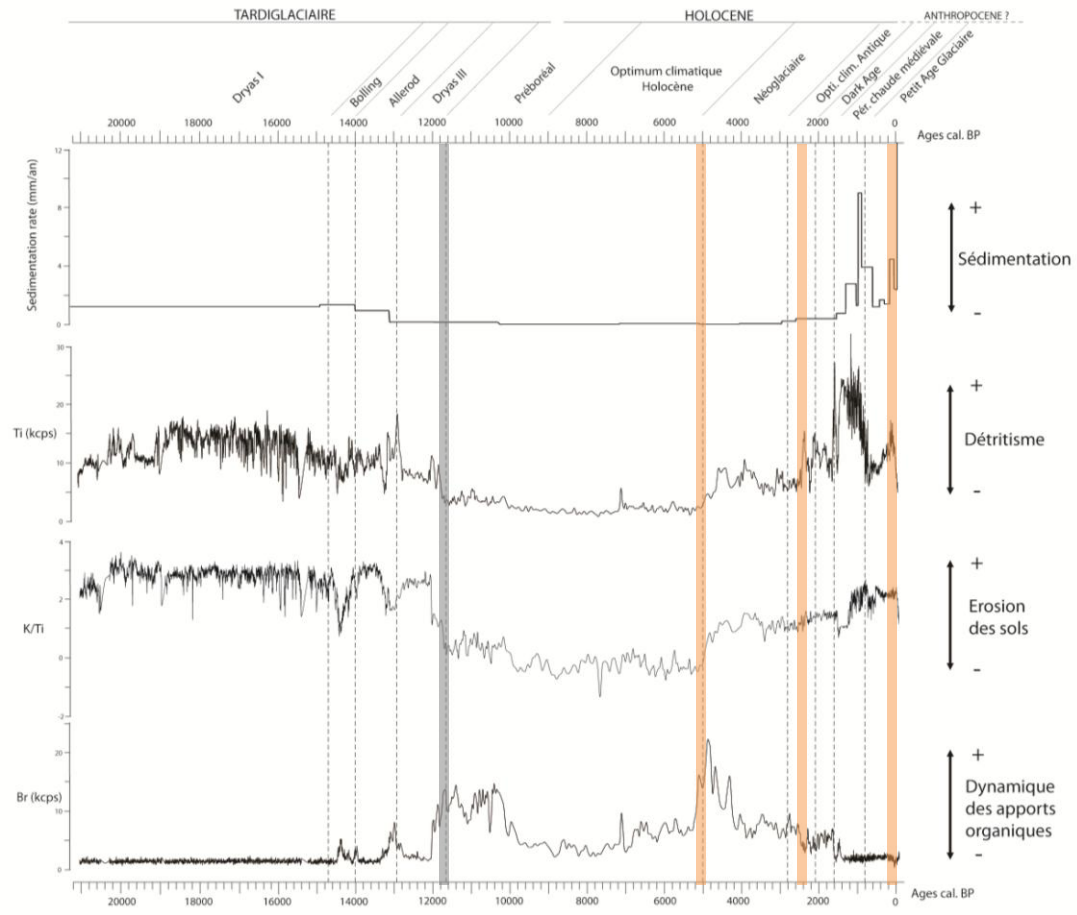
Résultats – synthèse : dynamique du bassin versant du lac de La Thuile



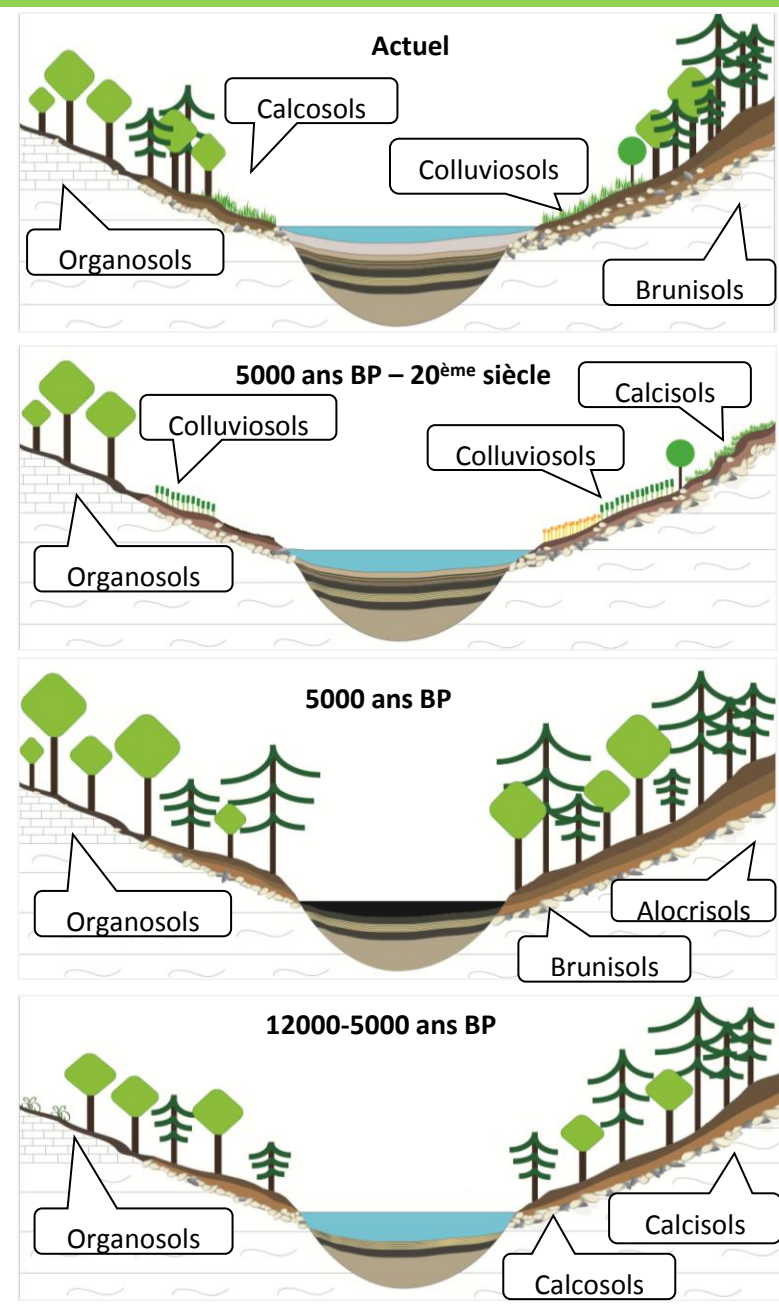
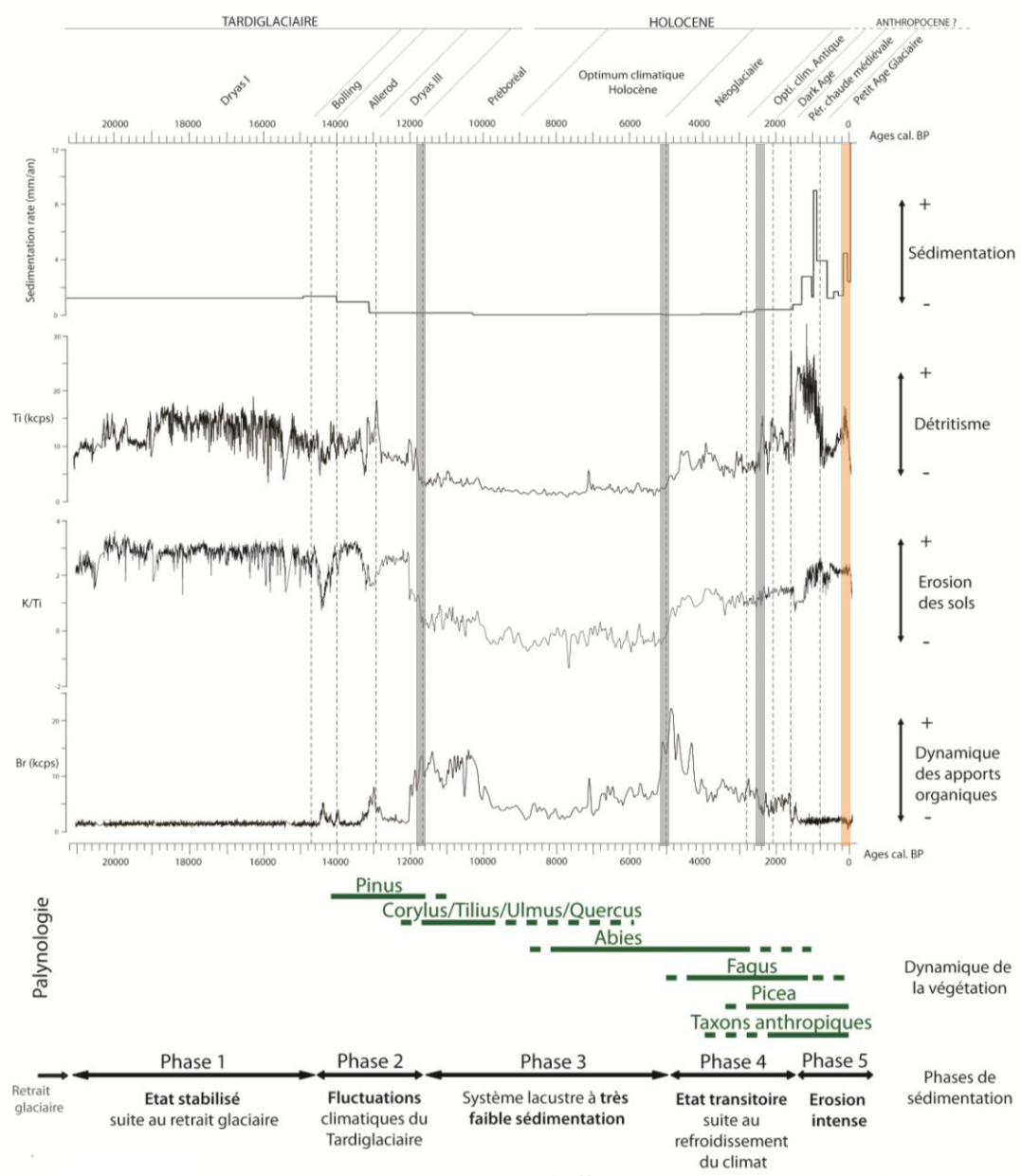
Résultats – synthèse : dynamique du bassin versant du lac de La Thuile

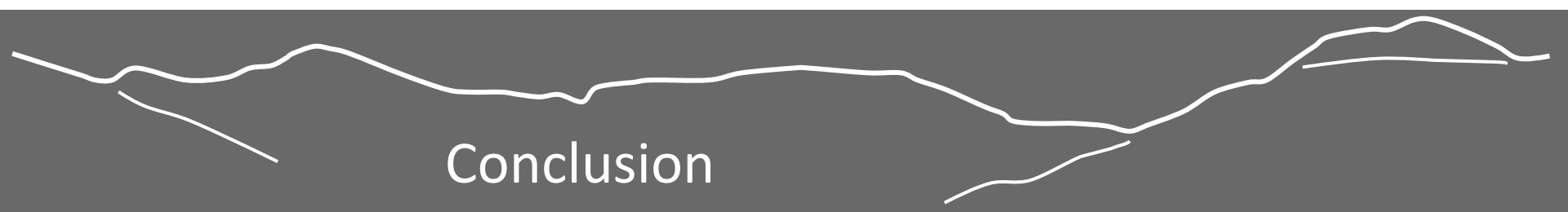
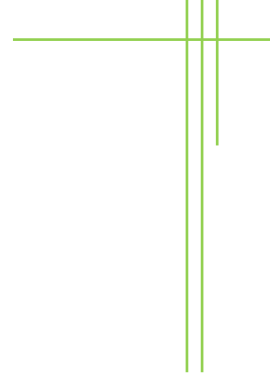


Résultats – synthèse : dynamique du bassin versant du lac de La Thuile



Résultats – synthèse : dynamique du bassin versant du lac de La Thuile



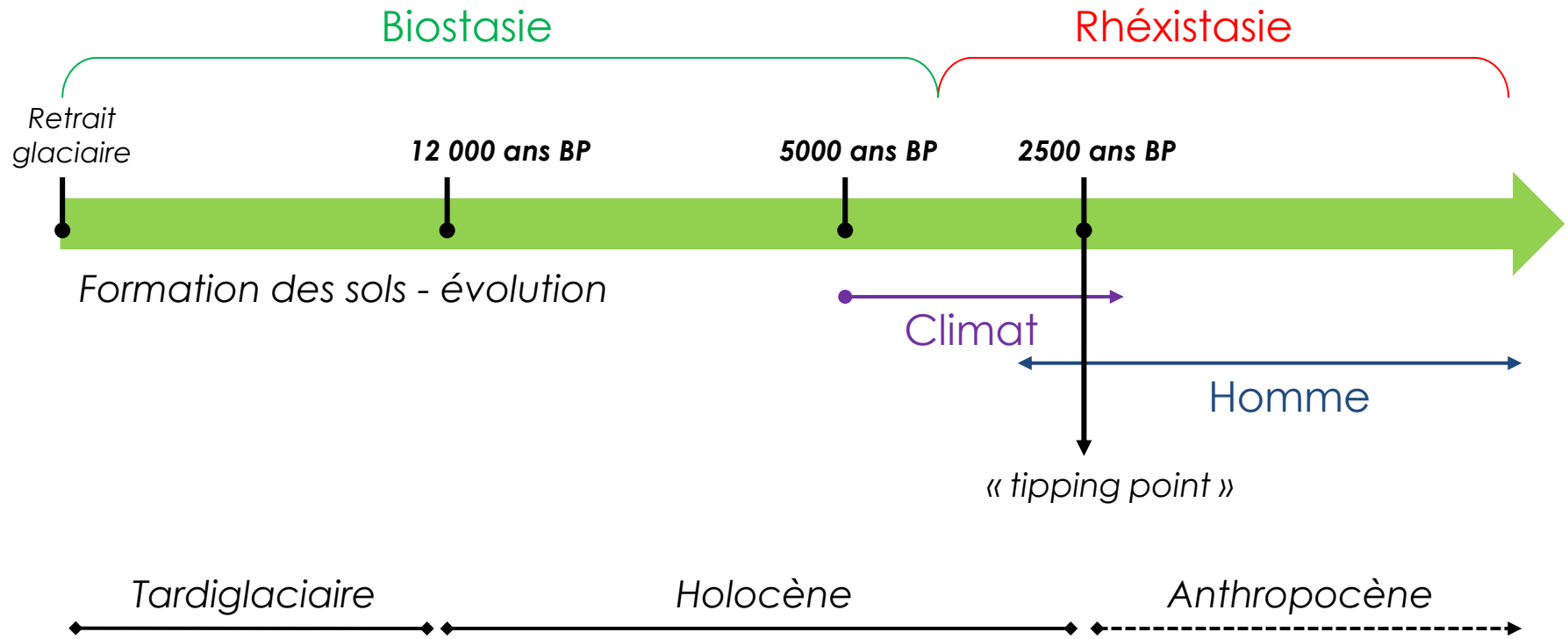


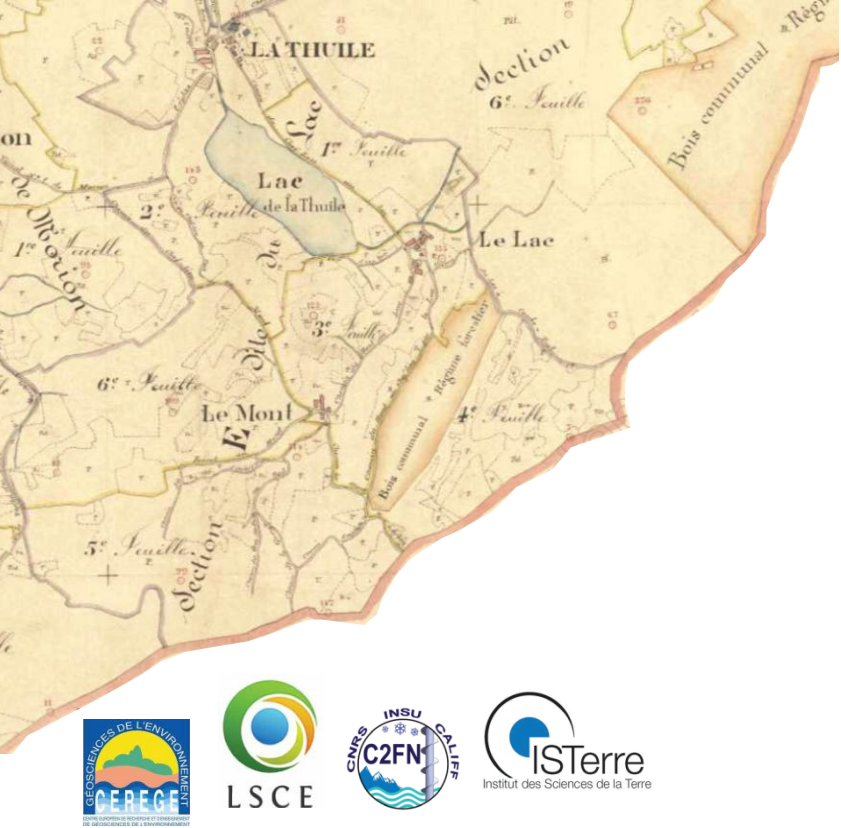
Conclusion



Approche paléo-environnementale

Reconstitution des trajectoires d'évolution des sols





Merci de votre attention

