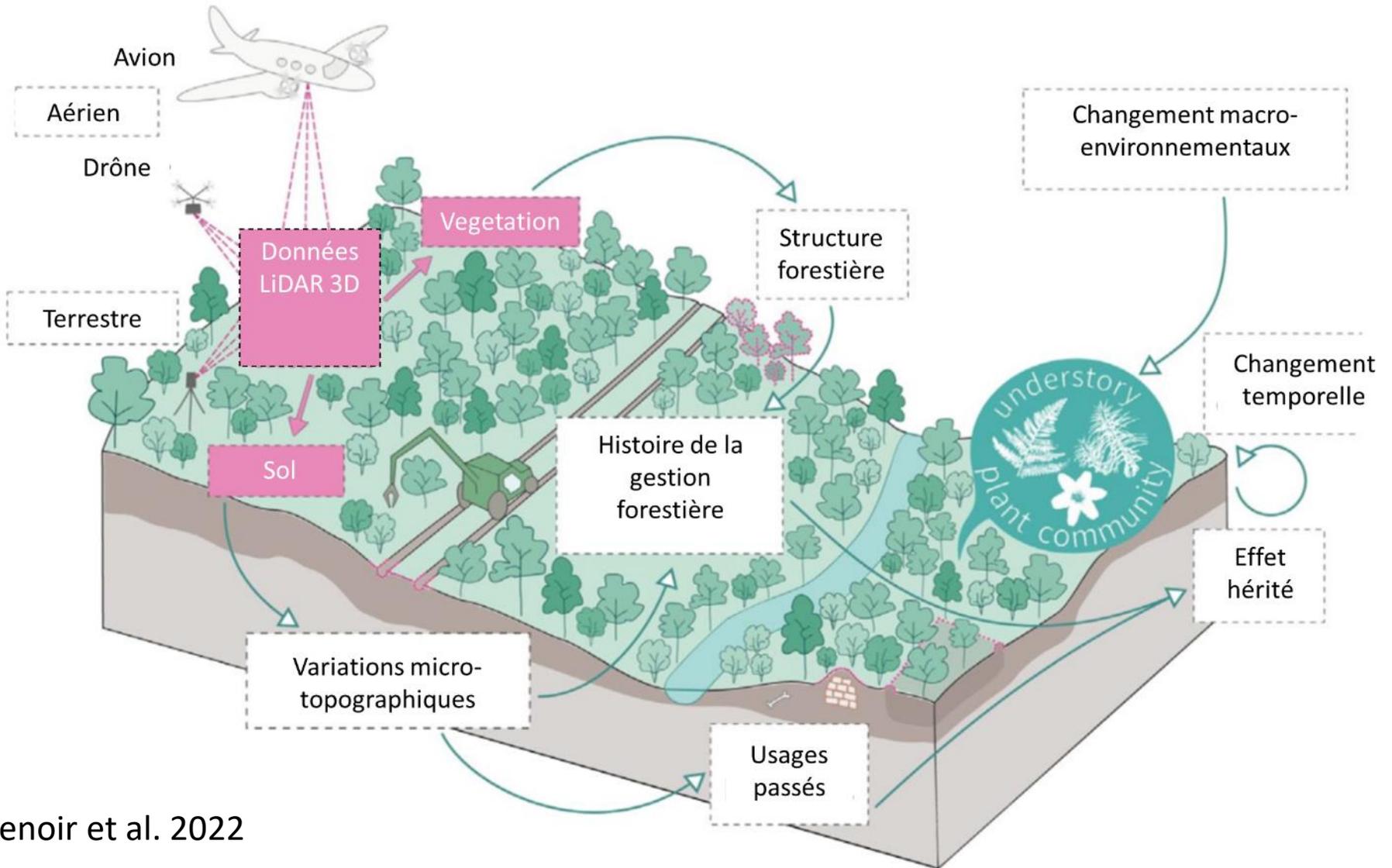
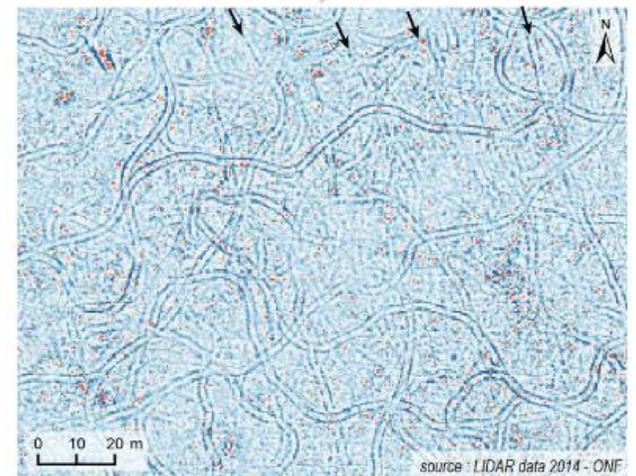
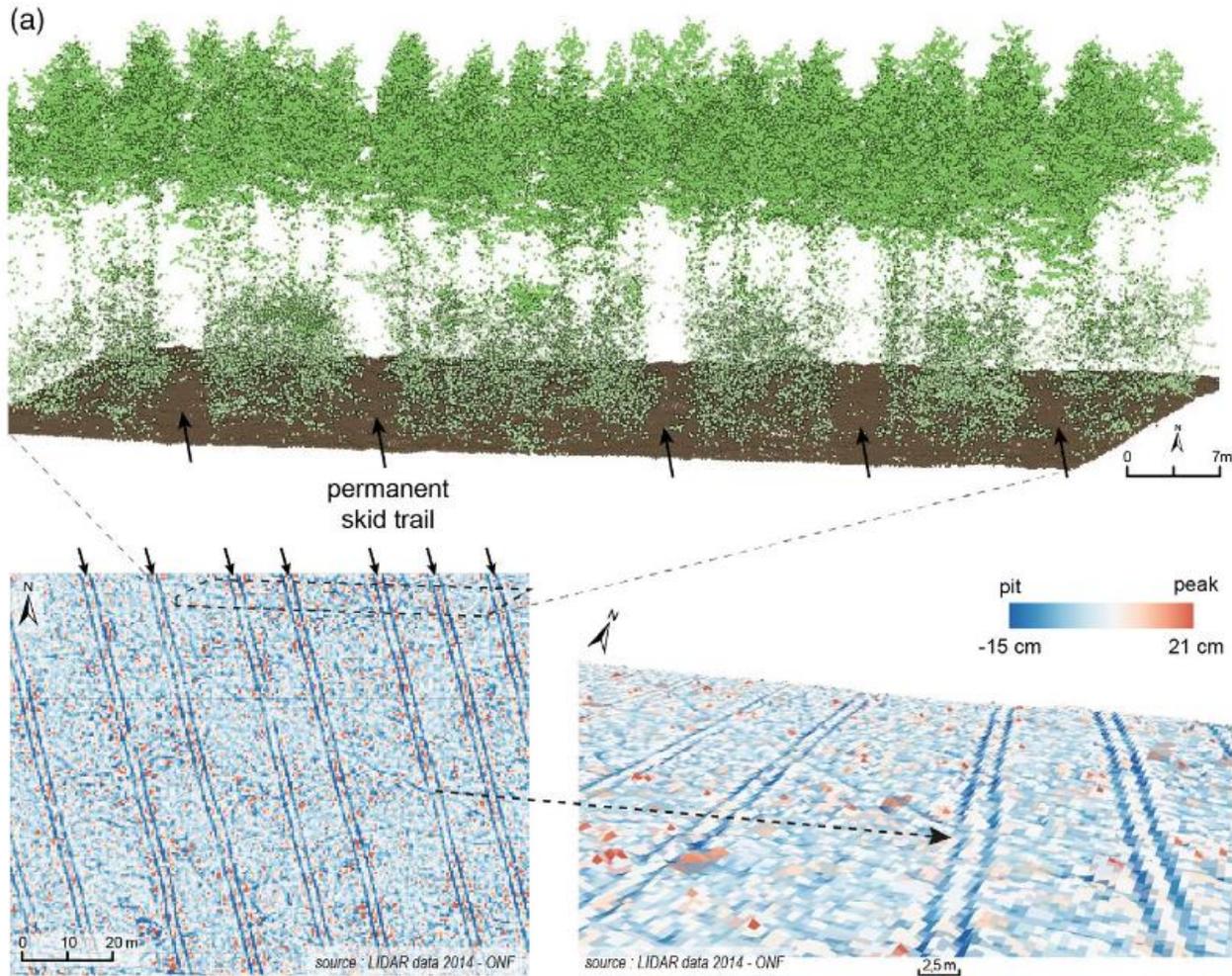
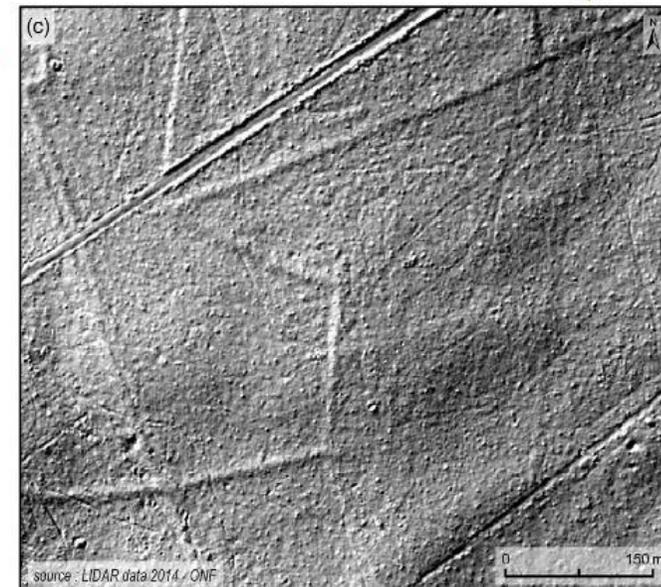
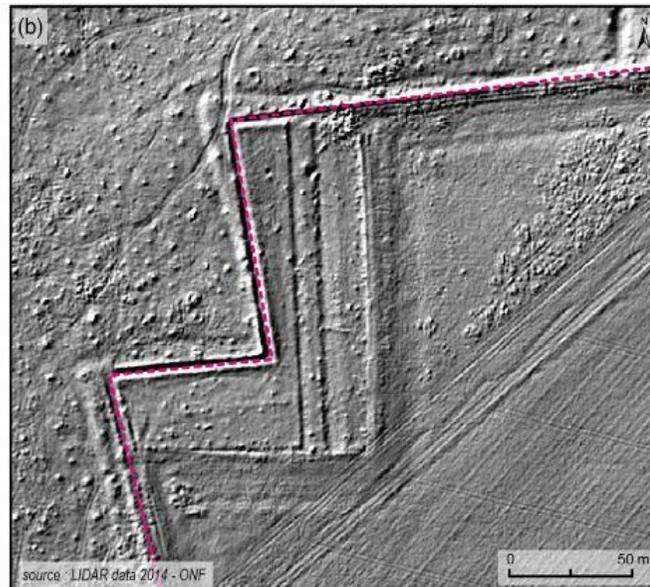
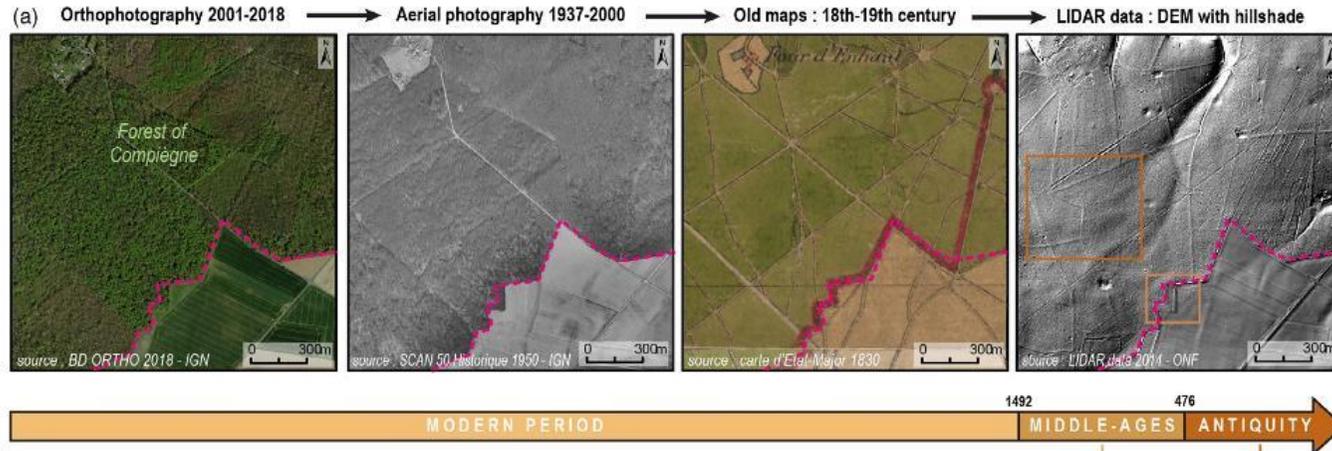




## EDYSAN, une unité de recherche au service de l'écologie végétale dans un contexte de changement globaux au sein des Hauts de France

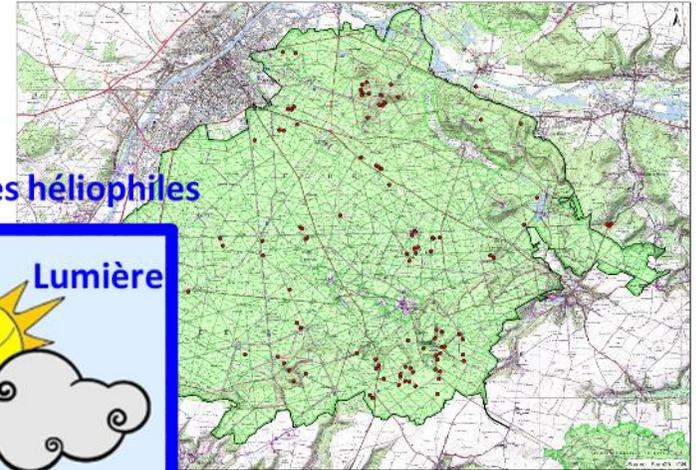






Re-échantillonnage de 78 placettes:

- Tombal 1970
- 2015



→ Esp. nitrophiles



→ Espèces héliophiles



→ Densité croissante d'ongulés

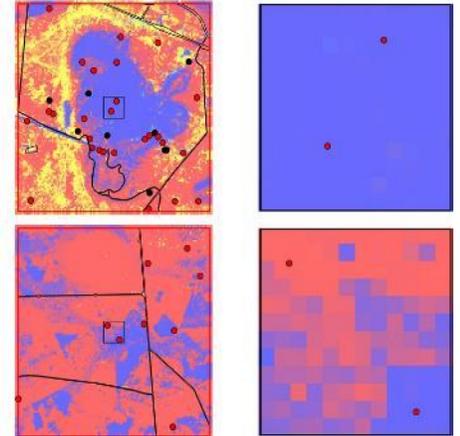
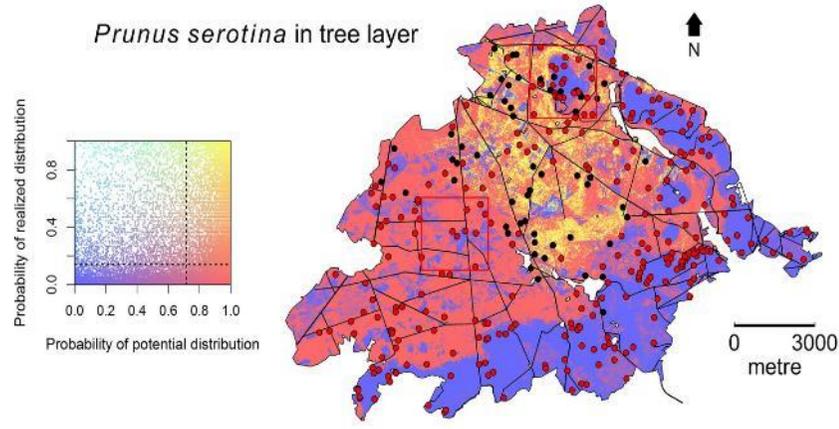
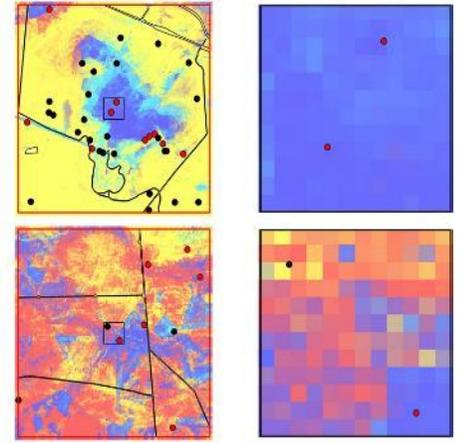
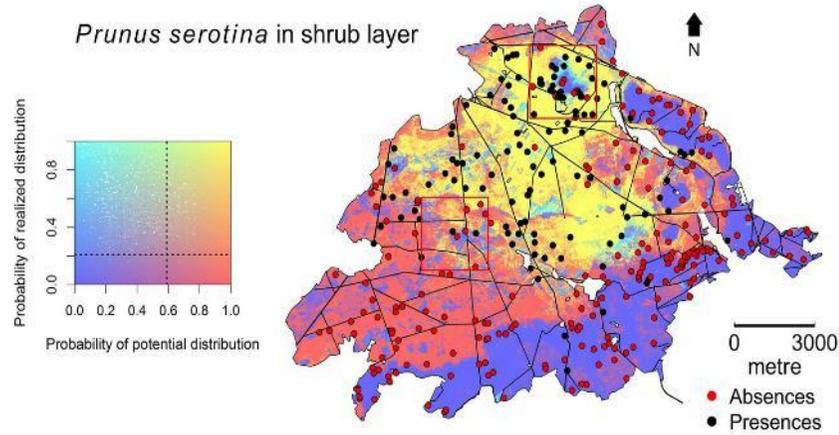
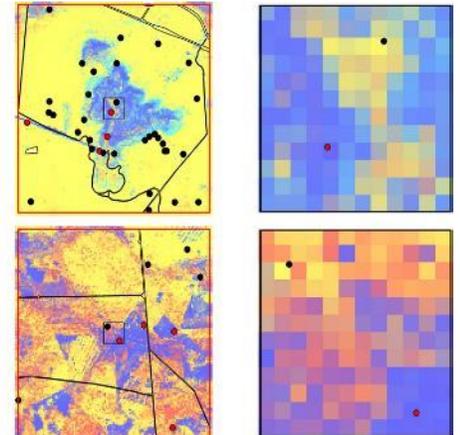
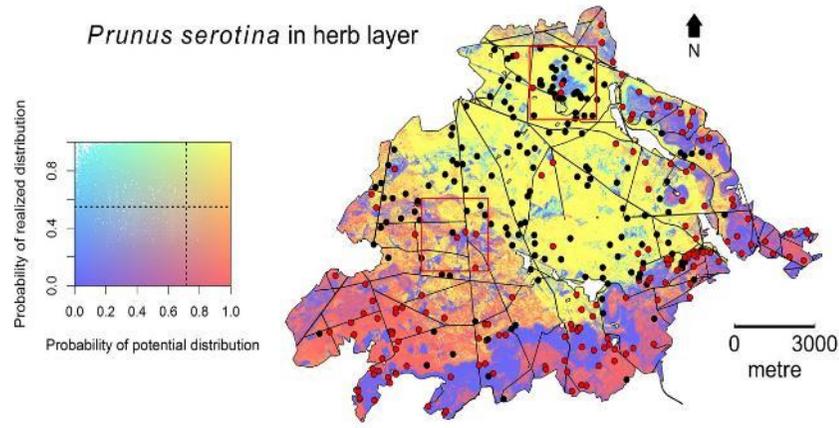


→ Agestochorie

→ Invasion de *Prunus serotina*

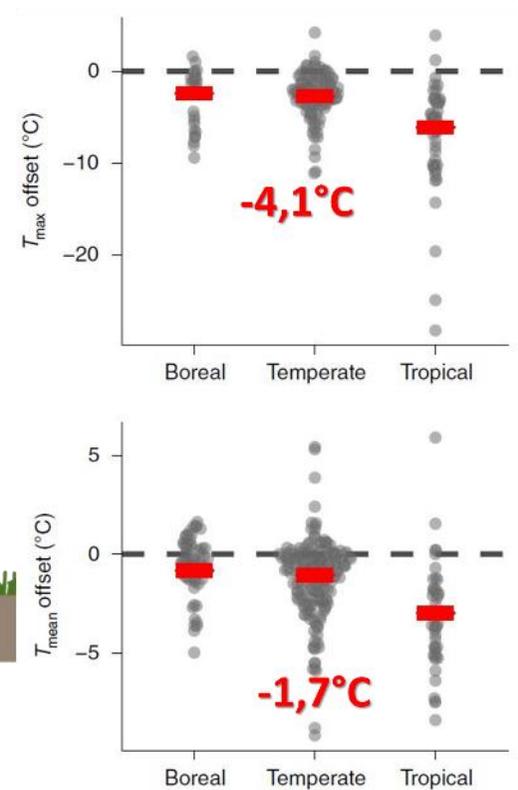
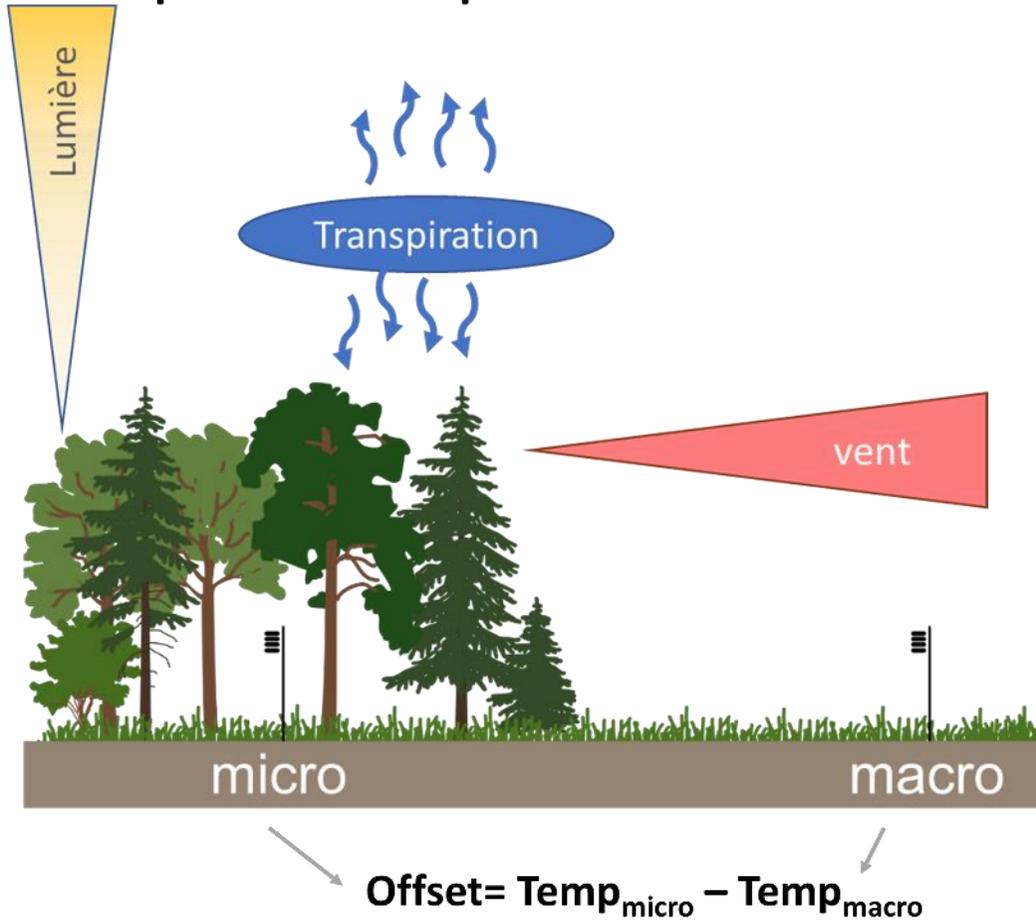
Esp. Rudérales et héliophiles ←

# Un nuage LiDAR et la modélisation pour comprendre l'évolution d'une espèce exotique envahissante



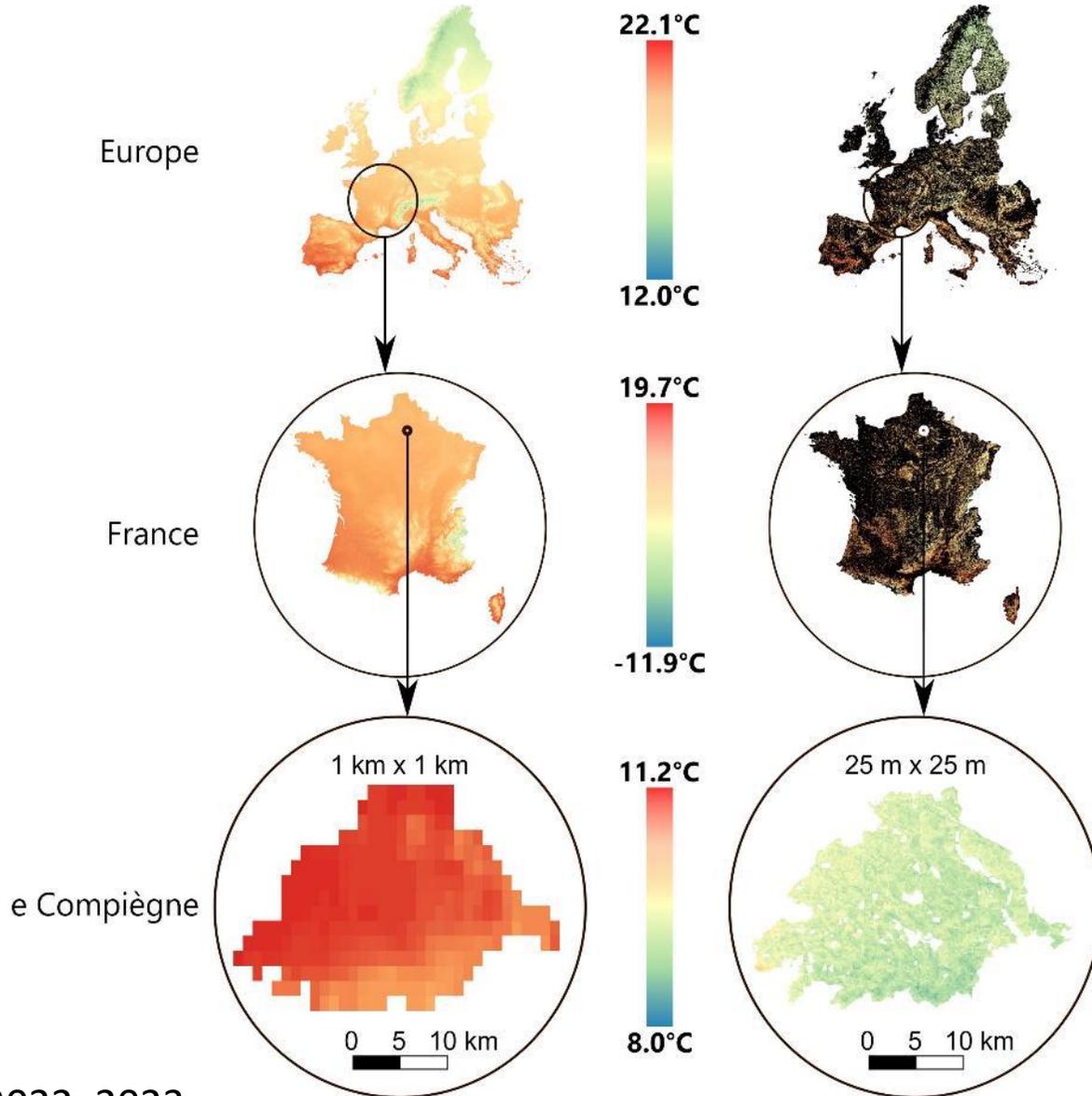
# Quels sont les principaux facteurs générateurs de microclimats ?

## Le pouvoir « tampon » de la forêt



Température moyenne annuelle  
synoptique de l'air

Température moyenne annuelle  
sous-covert forestier

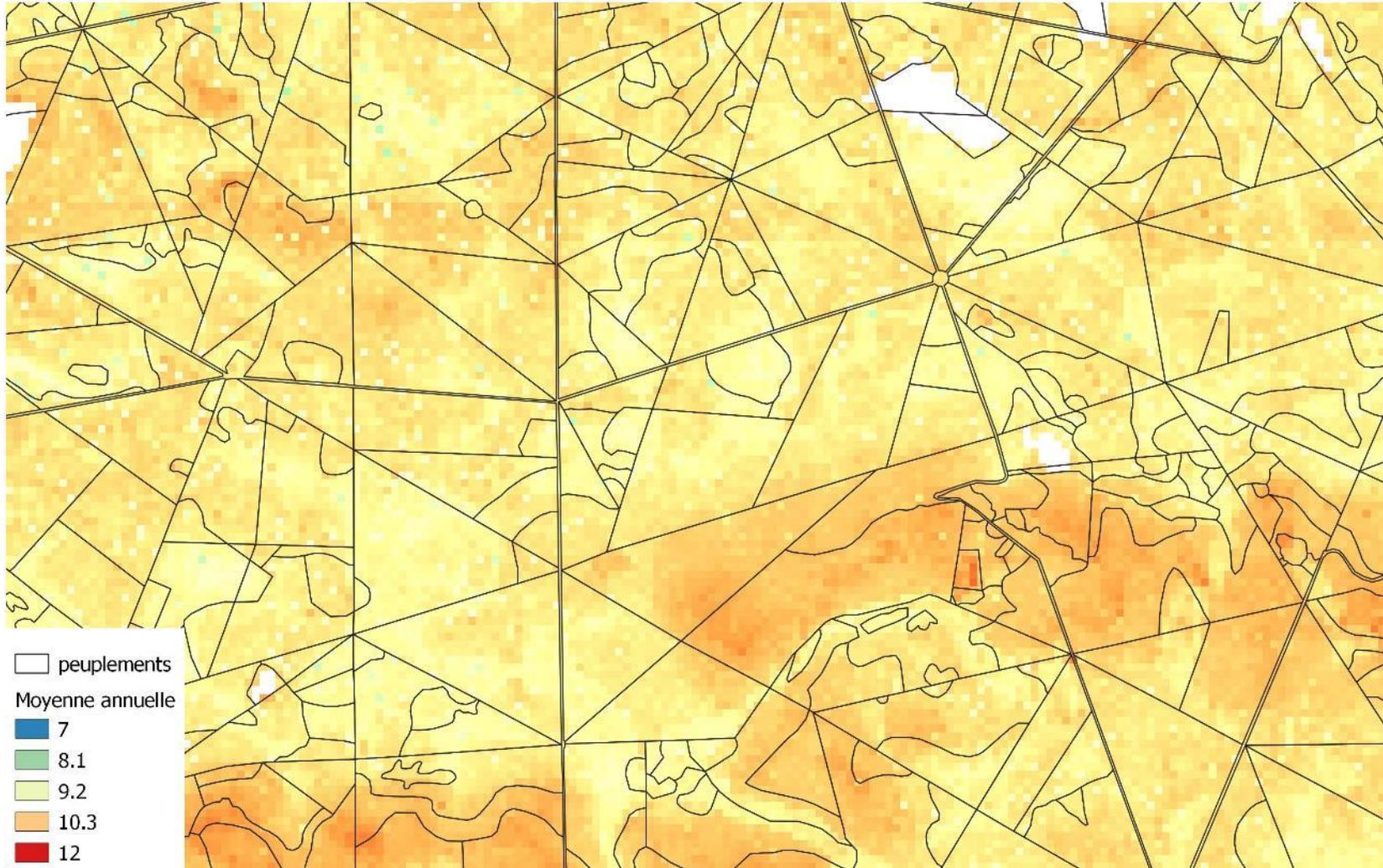


# Moyenne annuelle



# Moyenne annuelle

Haesen et al. 2022, 2023

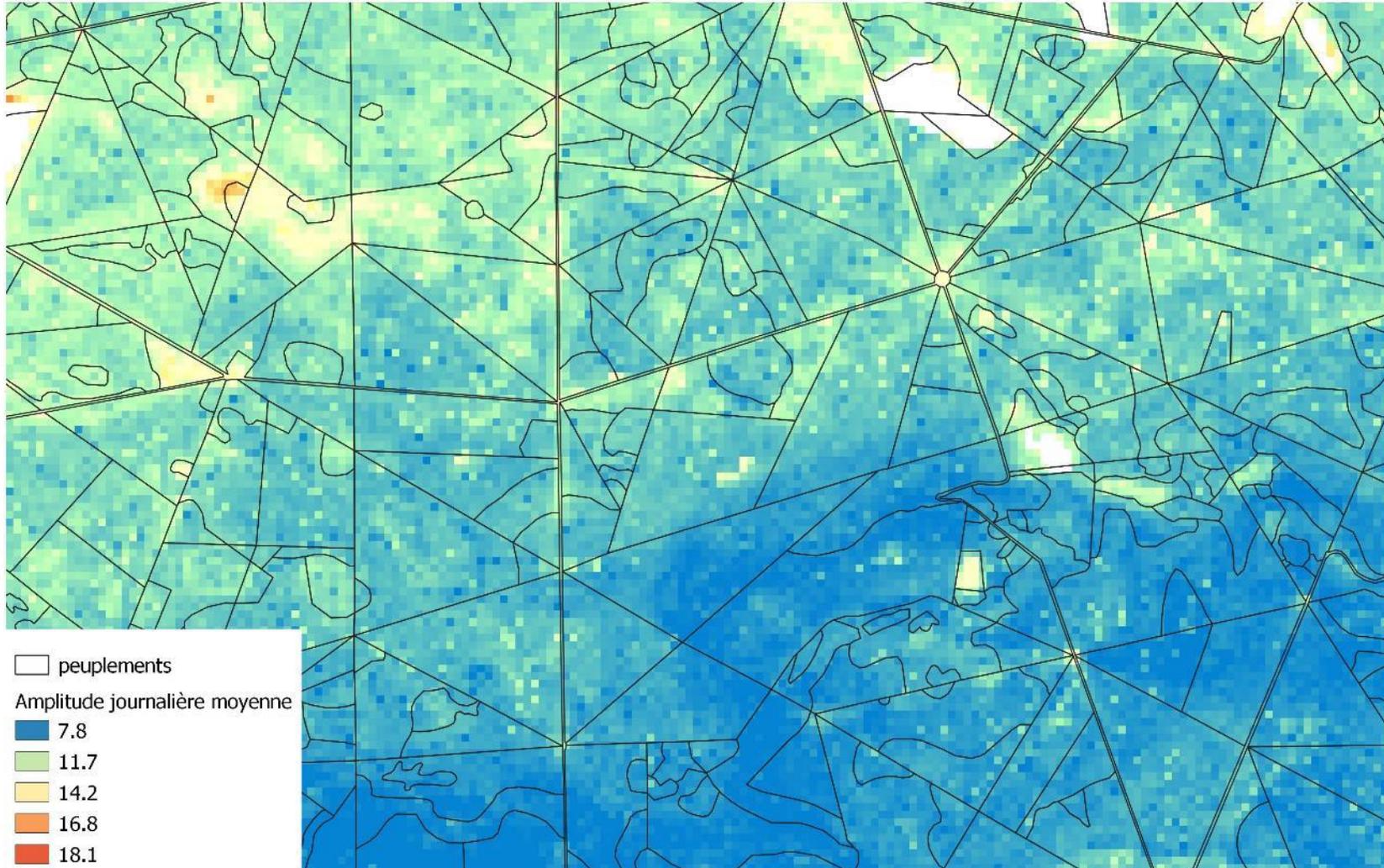


# Amplitude moyenne journalière



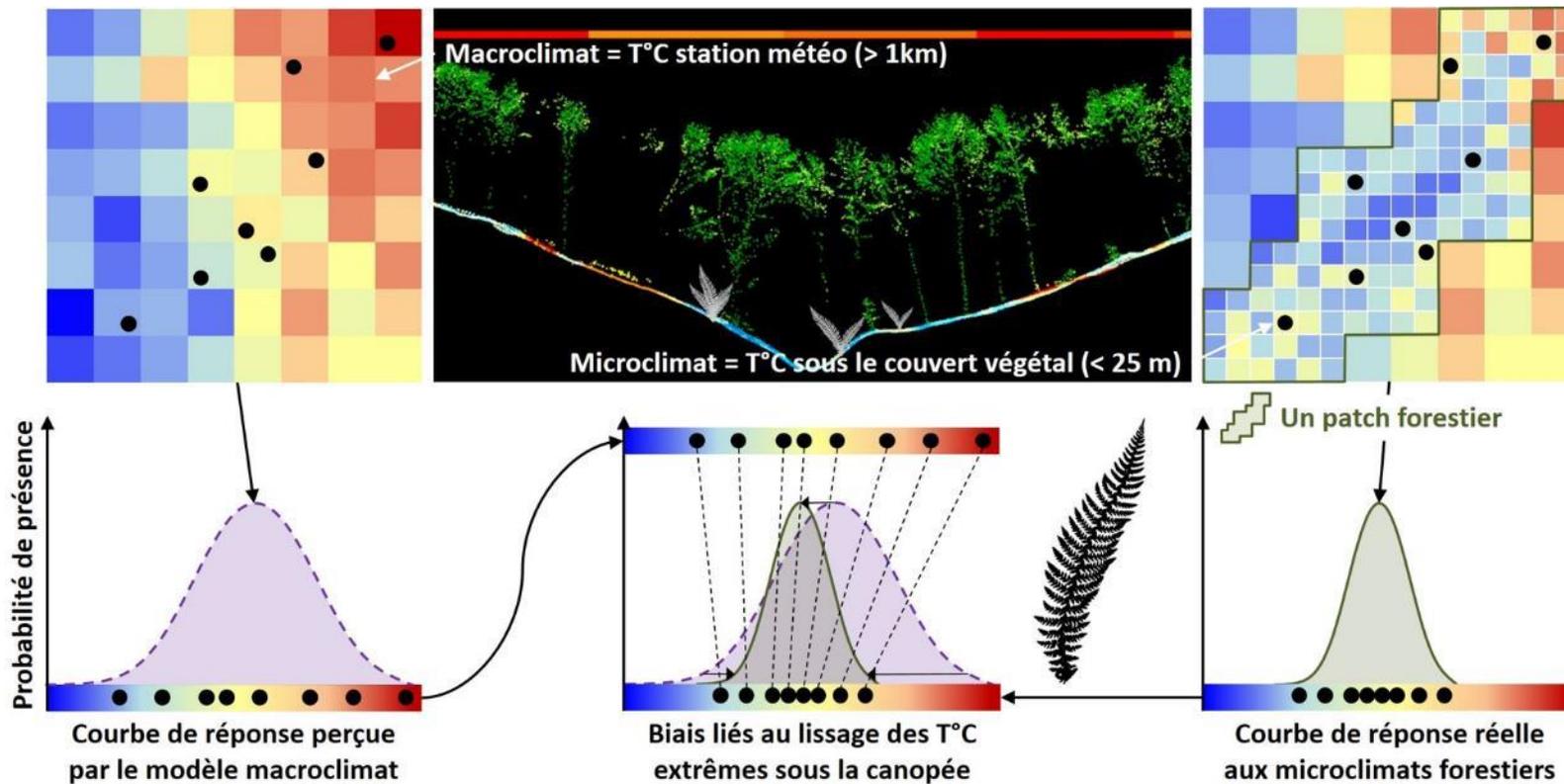
# Amplitude journalière moyenne

Haesen et al. 2022, 2023



# Vers une bio indication du microclimat

Haesen et al. 2023



Jonathan Lenoir

# Merci pour votre attention!



Ecologie et Dynamique  
des Systèmes Anthropisés

UMR 7058 CNRS-UPJV  
[www.u-picardie.fr/edysan](http://www.u-picardie.fr/edysan)



[fspicher.wordpress.com](http://fspicher.wordpress.com)

[microclimat.cnrs.fr](http://microclimat.cnrs.fr)

@fspicher  
@UMR\_EDYSAN  
@ForMicroclimate

