

# Carnivore-related bone damage and dispersal in the Swiss Alps:

## A forensic anthropological analysis

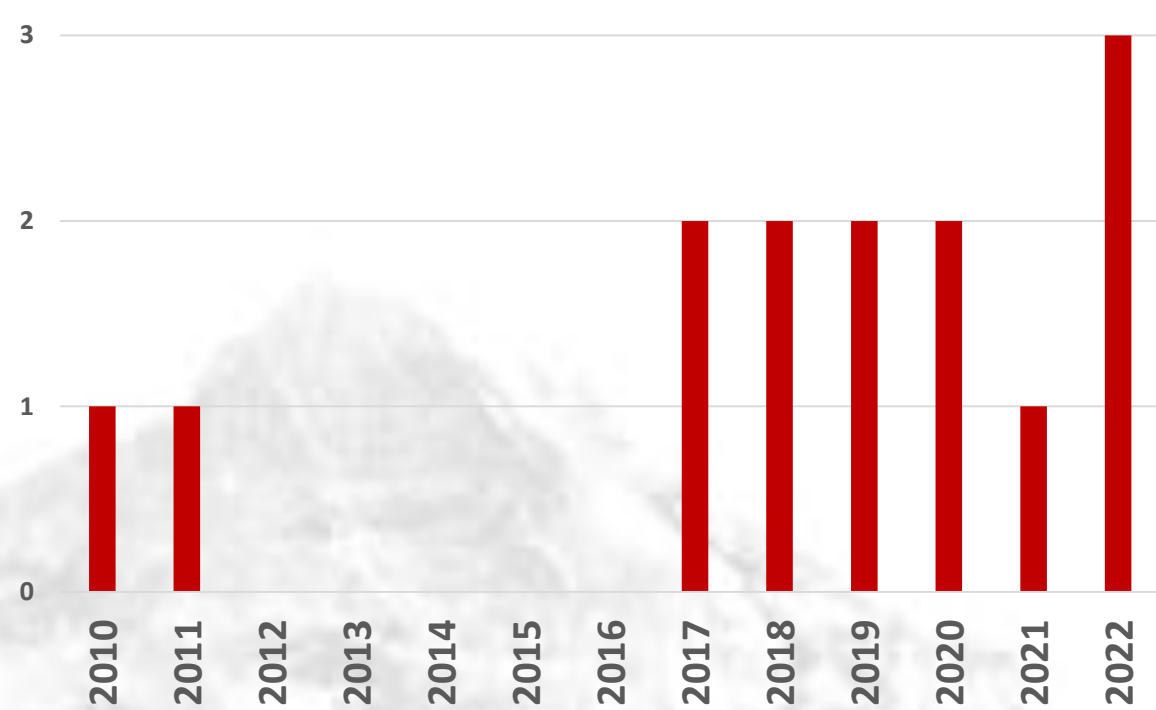
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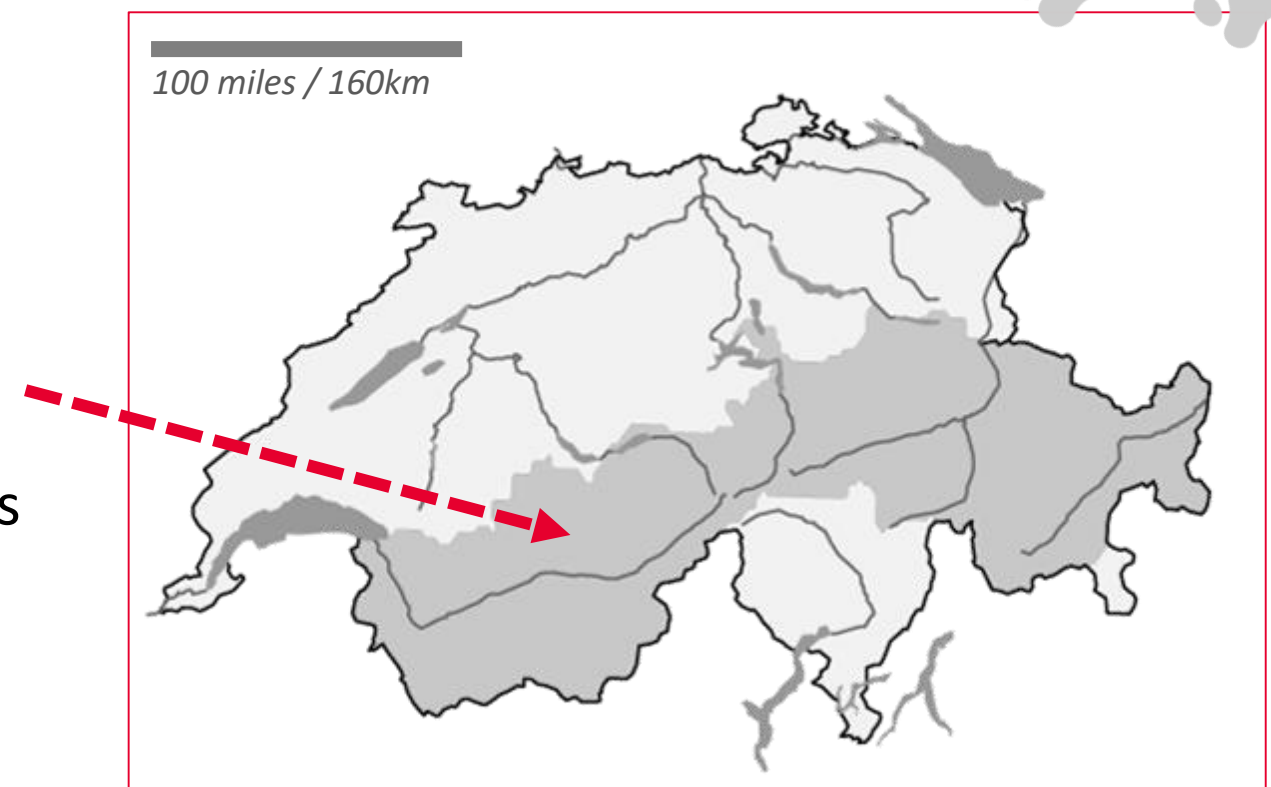
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### Introduction

- Vertebrate scavengers can greatly affect forensic analyses
- Human remains are frequently recovered in the Swiss Alps
- **Aim:** Investigate effects of vertebrate scavengers on human remains and to inform future casework



Our yearly forensic anthropology cases from the mountains



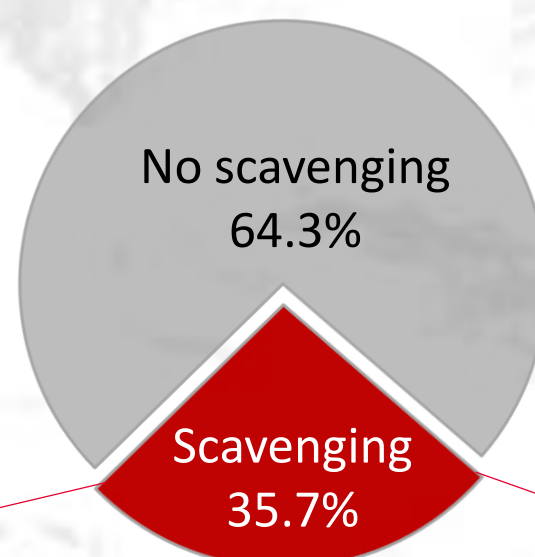
Switzerland with the Alps coloured in dark grey

### Material and Methods

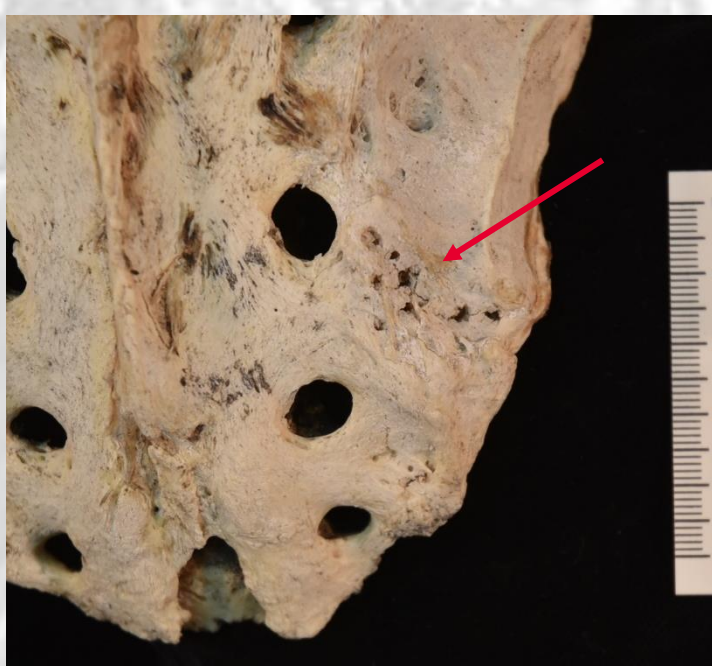
- We examined 14 cases from the Alps in 2010-2022
- All were recovered above 2000m altitude
- We documented scavenger-related taphonomic changes

### Results & Discussion

- Signs of scavenging in five cases (35.7%)
- All lesions typical for canids (red fox or wolf)
- Scavenged skeletons were incomplete (<25%)



- Dispersal radius up to 400m horizontally
- Alpine casework is increasing in number, possibly linked to climate change



Tooth punctures on the dorsal side of a sacrum



Missing epiphysis and hollowed out distal femoral shaft



Missing epiphysis and pits on a distal fibula shaft



Missing epiphysis and striations on a distal femoral shaft

### Conclusions

- Human remains from the Alps are scavenged by carnivores
- Scavenging leads to low recovery and high dispersal rates
- Our study can help with search strategies in future cases

