

Carnivore-related bone damage and dispersal in the Swiss Alps: A forensic anthropological analysis

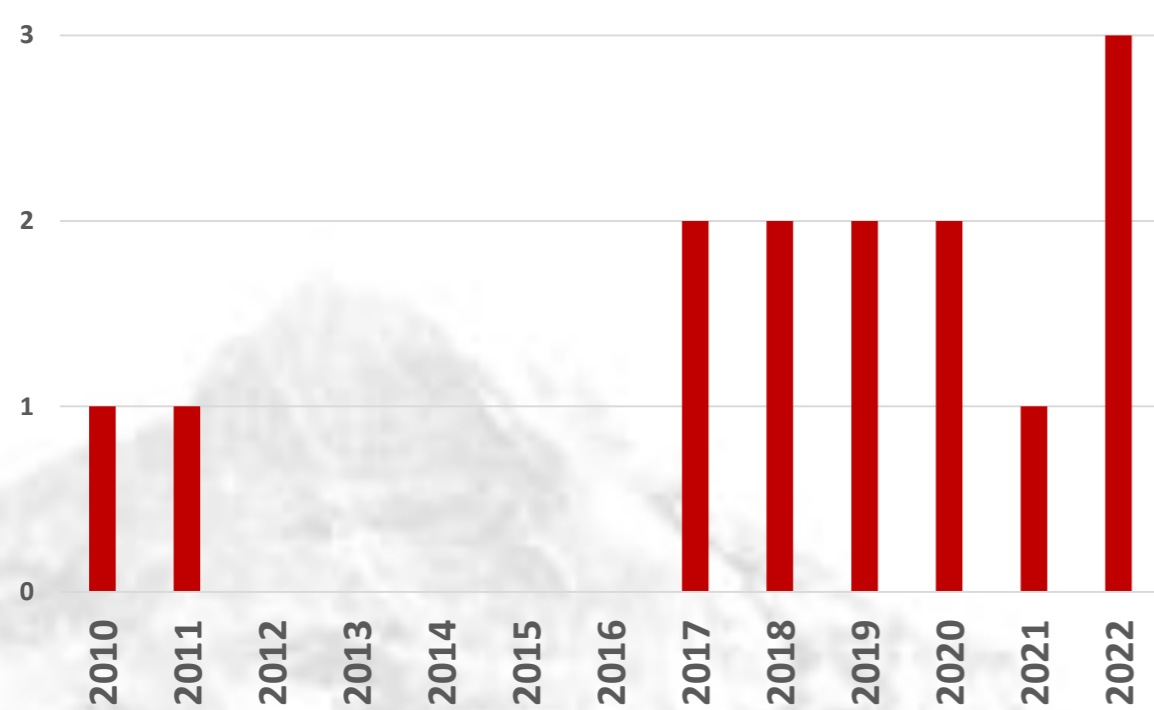
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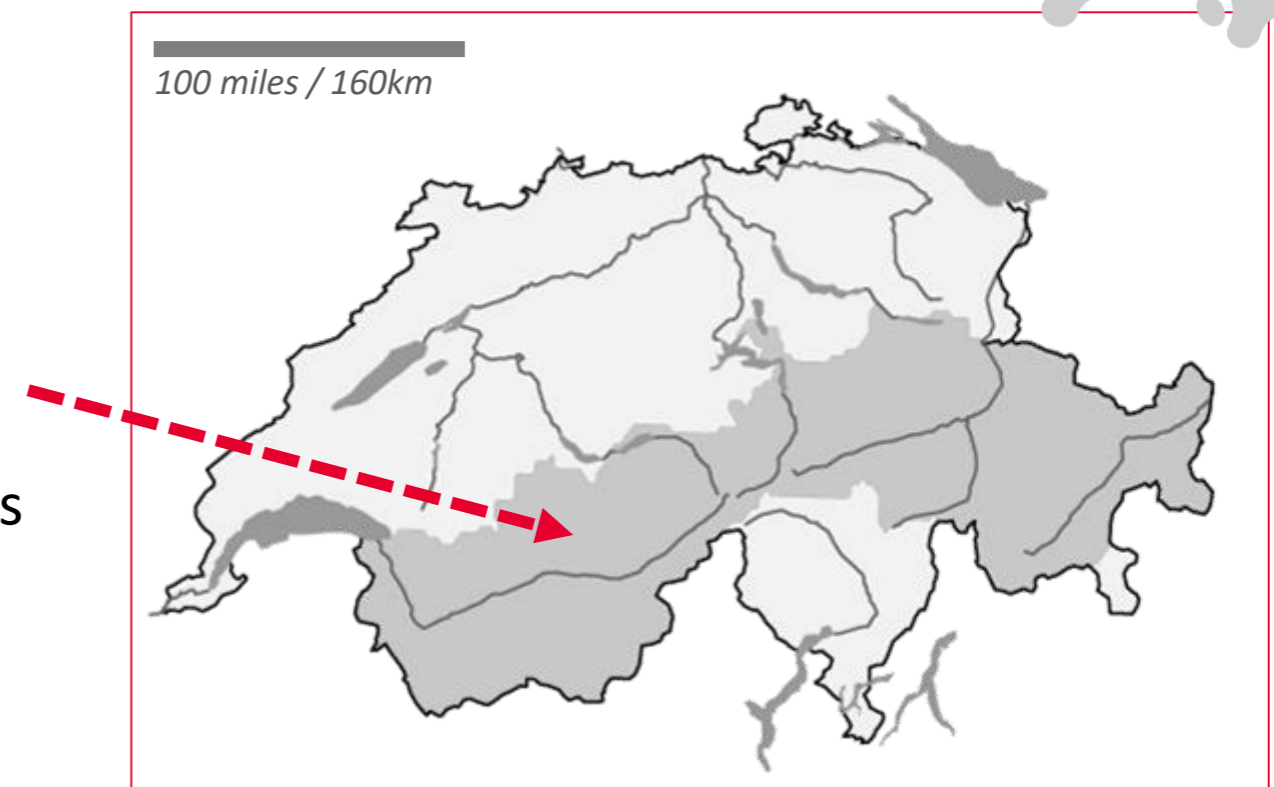
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Introduction

- 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



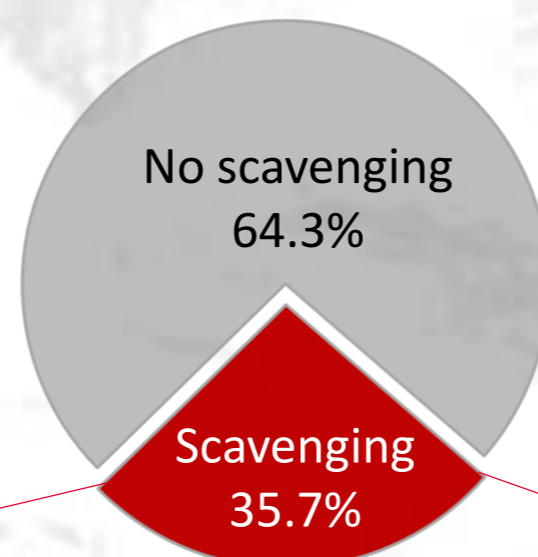
Switzerland with the Alps coloured in dark grey

Material and Methods

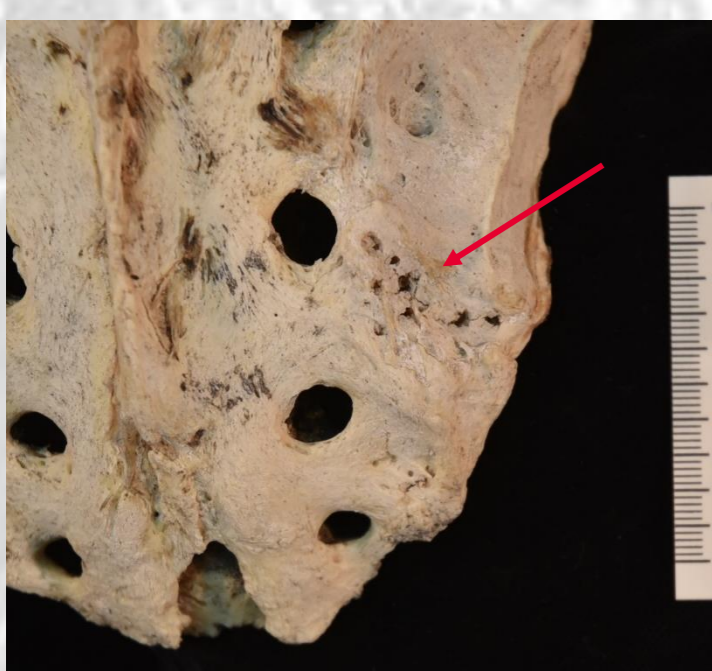
- We examined 14 cases from the Alps in 2010-2022
- All were recovered above 2000m altitude
- We documented scavenger-related taphonomic changes

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

