

# The effects of climate and environmental change to Late Quaternary vegetation and fauna in Northern Eurasia

Project overview

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# SUMMARY OF THE PROJECT

## Summary:

- Apply the combination isotope and plant macrofossil analysis to provide a unique insight into climatic changes in the Western Siberia over the last 50 000 years
- Shed a light on the causes of woolly mammoth extinction

## Methods:

- Oxygen isotopes
- Nitrogen isotopes
- Carbon isotopes
- Plant macrofossils

# GEOGRAPHY

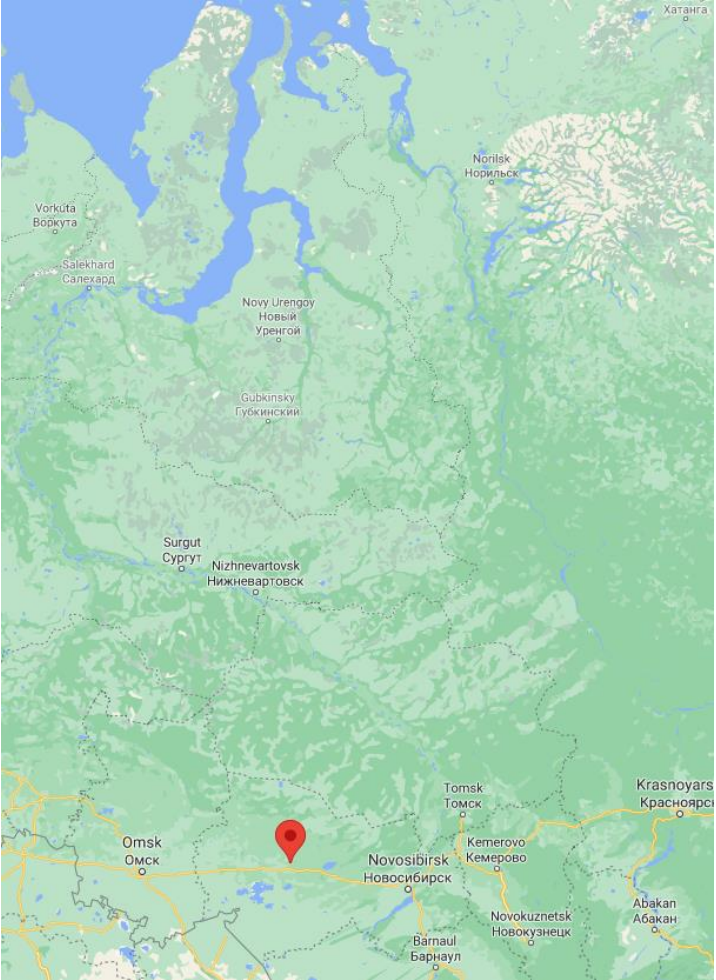


West Siberian region

# MAIN SAMPLING SITES



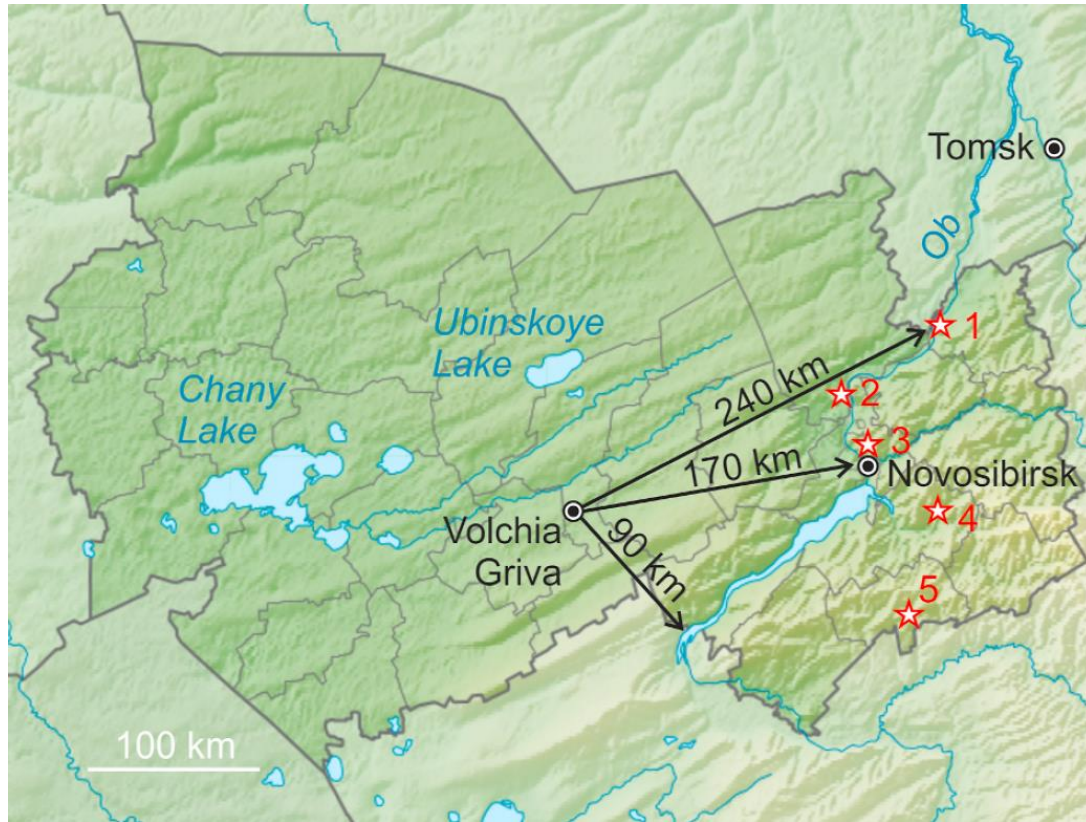
Volchia Griva (Leshchinskiy et al., 2020)



Chuklaida



# Volchia Griva



The location of Volchia Griva (Leshchinskiy et al., 2020)



Field excavation at Volchia Griva (Leshchinskiy et al., 2020)



# VOLCHIA GRIVA



The drone shot of Volchia Griva, 2021



# EXCAVATION





# Chuklaida





# EXCAVATION



Rhino jaw found on the bank of river Om'



## INCLUSION OF RODENTS (AND MODERN COLLECTIONS)

- Small vertebrates provide valuable information necessary to reconstruct the paleoenvironment and paleoclimate of a specific region (Cersoy et al., 2017)
- Give important clues about local vegetation variations and, as a consequence, about climate changes (Cersoy et al., 2017)
- The biochronology of many taxa is relatively well known (Cersoy et al., 2017)



Incisors of *Microtus* sp.



# HIGHLIGHTS AND CHALLENGES

## Highlights

- Availability of samples and sampling sites
- The majority of the available samples are already documented and geographically linked. No need to collect the material from scratch
- A large number of samples was collected (a lot of them are dated and in excellent condition)

## Challenges:

- Very limited/small number of comparable databases
- Samples take longer time to arrive than we expected

Thank you for your attention!