

## UPDATES

BERA welcomes new researchers [Alessandro Franceschini](#) (PhD student, Human/Wildlife Team) and [Leonardo Viliiani](#), PhD student, Vegetation Team).

### New Publications:

- [Relative Importance for Lincoln's Sparrow \(\*Melospiza lincolnii\*\) Occupancy of Vegetation Type versus Noise Caused by Industrial Development](#)
- [How mounds are made matters: Seismic line restoration techniques affect peat physical and chemical properties throughout the peat profile](#)

## BERA SPRING RETREAT

After 2+ years of Zoom meetings, it sure was nice to see everyone face-to-face at the 2022 Spring Retreat! Researchers and partner representatives gathered for three days of science discussions in Kananaskis Country. Retreat participants worked hard on [research project updates](#), field protocols, and collaboration strategies before heading north for a very busy field season.



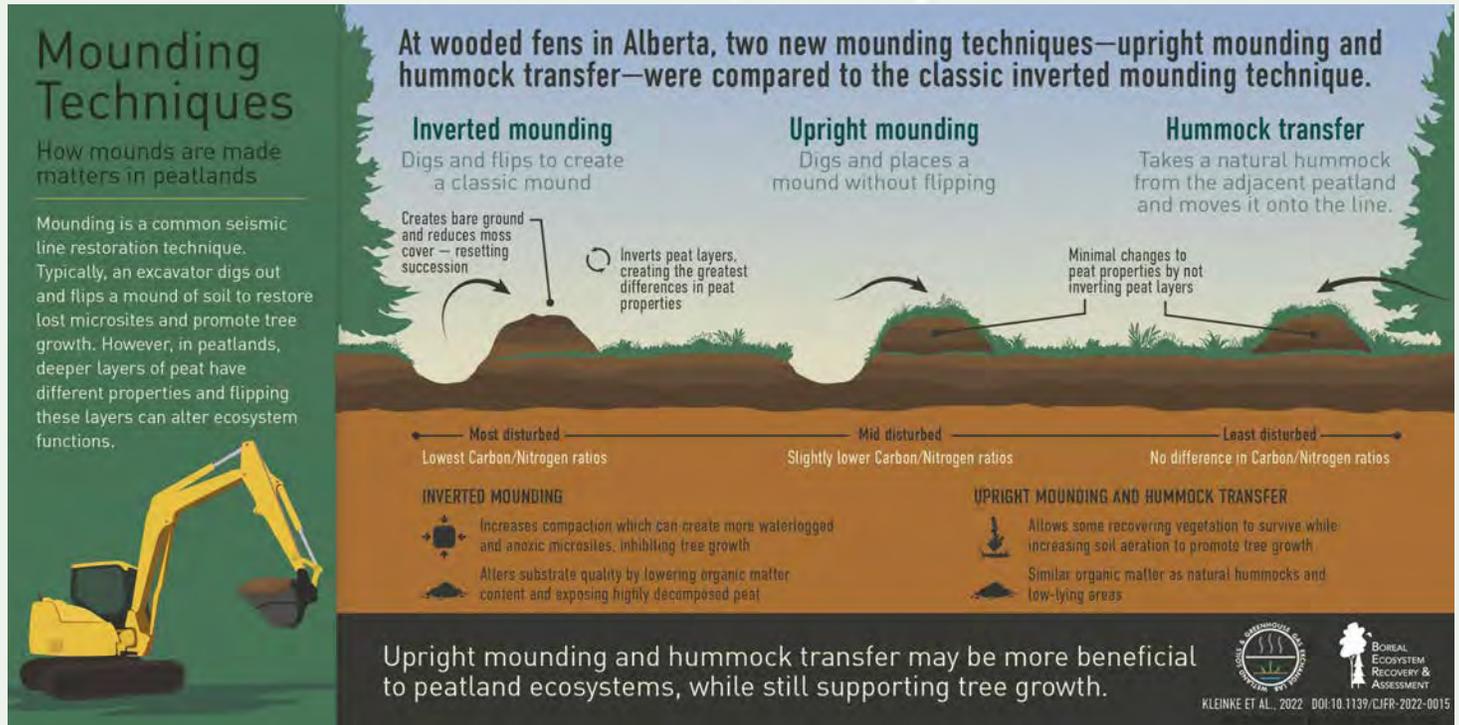
## RESEARCHER PROFILE

[Jasper Koch](#), [Patrick Klotz](#), [Marlis Hegels](#), and [Niklas Heiss](#) are from Ludwig Maximilian University of Munich, Germany. The four researchers are spending six months in Canada through the Mitacs Globallink program, and will complete their Masters theses on projects as part of the Remote Sensing and Soils/Ecohydrology teams.





## RESEARCH HIGHLIGHTS (1 OF 2)



Mounding is a common restoration technique designed to improve microsite conditions for planted seedlings in wetlands. There are a variety of strategies for constructing mounds, though, and how mounds are made matters. In this paper, Kim Kleinke and colleagues in the Soils and Ecohydrology team show how new mounding techniques – intact mounding and hummock transfer – result in higher soil quality than current methods of inverted mounding.

For the full article [click here](#).



## RESEARCH HIGHLIGHTS (2 OF 2)

### Adapting to Noise

How Chronic Industrial noise affects the Lincoln's Sparrow

In northern Alberta, noise from industrial disturbances can affect songbirds. Since industry disturbances also affect vegetation communities, it is important to also consider the habitat requirements of a species when determining how noise impacts birds.



The Lincoln's Sparrow prefers open and edge habitats that are often created by industrial activities. For areas with similar levels of vegetation disturbance, sparrows were less likely to occupy those with greater noise.



Lincoln's Sparrows prefer to breed in open areas with small shrubs and are likely to tolerate living in areas with certain levels of noise if the habitat vegetation conditions are ideal.



In order to live in noisy areas, the birds need to adapt the ways they communicate. The chronic noise generated by compressor stations affected the vocal features of Lincoln's Sparrow songs. Males breeding in noisy areas were found to:



Singing loudly and more frequently requires more energy and may only be effective over short distances. Since long distance communication is needed to attract females, sparrows in noisy areas may need to move around more. This could lead to greater exposure to predators and less time spent foraging. Further investigation is required to understand the full effects of noise on Lincoln's Sparrow populations.



Noise from industrial disturbance can affect the behaviour of songbirds and other wildlife in northern Alberta. In this research, Natalie Sanchez and colleagues in the Humans/Wildlife team show that Lincoln's sparrow have adapted their song patterns to deal with chronic noise from compressor stations.

To read the peer-reviewed article behind this research, [click here](#).

