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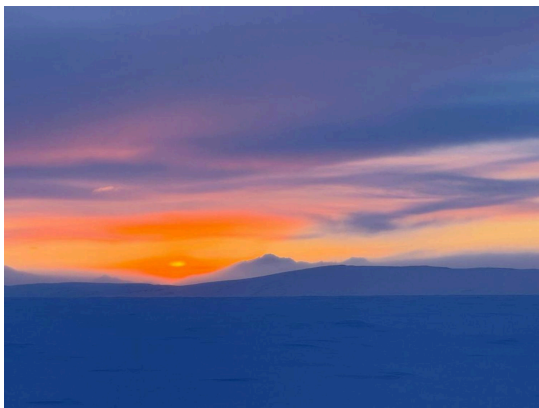
# Toolik Field Station Quarterly Newsletter Winter 2024

## Season Updates

### Reservations for the 2024 field season are due by March 31

Submit your reservation requests to our [myToolik system](#) for summer 2024. If you don't yet know all the members of your field team, select our placeholder "TBD" option when making reservations. If you have questions about how to submit to our reservation system, contact the Toolik Management Team at [uaf-iab-toolik@alaska.edu](mailto:uaf-iab-toolik@alaska.edu).

[Submit your summer reservation requests](#)



The sun's return to Toolik Field Station makes for [colorful Arctic sunsets](#) (left). [Ptarmigan](#) browse on willow buds (right). Photos by Justin Johnson & Amanda Young/TFS.

### Learn more about upcoming summer operations at our Town Hall on March 8

Toolik Field Station invites all to a virtual town hall on Friday, March 8 at 10 am Alaska time. We will give an informative overview on summer 2024 operations with time for questions and comments. Register for the Zoom webinar in advance at [bit.ly/toolik-town-hall-2024](https://bit.ly/toolik-town-hall-2024). A recording will be available for those who are unable to attend.



A [herd of muskox](#) create trails across the tundra, spotted by the Freeze or Famine group on their way to one of their warm spring study sites in the eastern Brooks Range. Photo by Adam Hensley.

## What's New at Toolik?

### What's that? Applications for Toolik's TUNDRA award are due this week?



Don't forget to submit your applications for our TUNDRA award, which awards students & early career researchers with up to 10 days to conduct an independent research project at the station. Applications are due Feb. 15. [Learn more about the award on our website.](#)

Thanks to the many community members who have [donated](#) to the award fund.

*Photo by Seth Beaudreault/TFS.*

### Departmental Highlight: Environmental Data Center

Toolik's EDC had an exciting year in 2023, from hiring new year-round employees to upholding exemplary partnerships and creating new products for outreach and data visualization.

[Learn about their 2023 highlights in this Toolik Spotlight article.](#)



### Mark your calendars for our 50th Year in 2025

Join us in celebrating our 50th year in 2025. [Sign up](#) for the 50th year information mailing list and share with Toolik alum from the past and present!

Have Toolik photos of the past and present that you'd like shared during the celebration? Send them to Haley Dunleavy at [hdunleavy@alaska.edu](mailto:hdunleavy@alaska.edu). Please include

Stay updated on our 50th year

## Research Highlight

### Attention permafrost microbes: iron has entered the group chat

When Karl Romanowicz, a postdoctoral researcher at the University of Oregon, first saw the results from his study on permafrost microbes, he almost didn't believe them. Romanowicz was conducting an incubation for his doctoral research to track how microbes in different tundra soil layers near Toolik Field Station transition as the permafrost thaws.

[Read about the drastic changes that Romanowicz and collaborators George Kling and Byron Crump found in their recent paper in ISME Communications on our website.](#)



*Karl Romaniwicz holds a section of a soil core taken near Imnavait Creek in July 2019. Photo by K. Romanowicz*

[Read more about the study](#)

## BeAJEDI at Toolik: Belonging, Accessibility, Justice, Equity, Diversity, and Inclusion

### Advertise your open summer positions on the Toolik Opportunities Board!

We host a [job and opportunities board on our website](#) to advertise open positions that are based at Toolik Field Station or involve research near the station. Send your position description and application information to [hdunleavy@alaska.edu](mailto:hdunleavy@alaska.edu) to post it to the board.

### Community Gear Closet inventory now on our website



*Undergraduate technicians Ariana Di Landro & Helen Brush use gear closet items while*

As we ramp up for the 2024 summer field season, don't forget to gear up. After the successful first year of the new Toolik Community Gear Closet, a summary of our [inventory of over 112 items is now published on the Toolik website](#). The closet was created Steering Committee student representations Ruby An & Brandon Yokeley and other community members as a step to reduce financial barriers to conducting safe fieldwork.

Gear is available for all station residents to borrow during their stay at the station. Please share with your

## Calling NSF-funded researchers: Applications now open for Polar STEAM 2025

Polar STEAM is recruiting researchers for the 2025-26 season to collaborate with educators, artists, and writers in developing broader impacts related to polar research. Whether you are field or lab-based, partnerships and collaborations with Polar STEAM will open up new opportunities for broader impacts and your work. Visit [www.polarsteam.info](http://www.polarsteam.info) to learn more and apply.

## Art Corner

### Registration now open for Painting in the Arctic: An Art Adventure at Toolik Field Station

Join Alaskan artist Klara Maisch and University of Alaska Fairbanks Summer Sessions and Lifelong Learning as they lead a six-day course in outdoor landscape painting this summer, June 13-20.

In this art-centric adventure, participants spend most of the course painting outside, with time for interpretive walks and hikes to explore our surroundings. Art instruction will include oil painting demonstrations, discussion of materials, one-on-one feedback, and guided sketching/conceptual exercises. [Learn more on the UAF Summer Sessions website.](#)

For beginners and beyond- an art adventure at Toolik Field Station

### Painting in the Arctic with Klara Maisch

June 13 – 20

This six-day class (with a travel day on each end) takes place at Toolik Field Station (TFS), UAF's remote research station 370 miles north of Fairbanks. The course aims to develop or strengthen an observational-based landscape painting practice using oil or acrylic paint (watercolor is also an option if you have previous experience). There will be structured painting demos, as well as ample time to create at least two landscape paintings on location. All experience levels are welcome. Please check the web listing for more information.



Klara Maisch documents landscape change in oil paintings created on location. She skis with paintbrushes, stores paint in bear barrels, and backpacks with stretcher bars. Klara also works as a wilderness guide for Arctic Wild and has previously instructed for Inspiring Girls Expeditions. See Klara's process and work at [klaramaisch.com](http://klaramaisch.com)



\$2,400

includes: roundtrip ground transportation from Fairbanks to TFS, lodging, meals, and six days of instruction in a remote, breathtaking location. Register now for this once-in-a-lifetime trip!

Read more and Sign up at:  
[uaf.edu/summer/travel/upcoming.php](http://uaf.edu/summer/travel/upcoming.php)



Summer Sessions @UAF Summer@alaska.edu || (907) 474-7021

## Toolik Community in the News

Was your Toolik-based research featured in the media? Or do you have an upcoming paper you'd like to share with the press? Submit a [media form](#) to share an article or request a press release.

- Oct. 22 — [Scientists Say Deepening Arctic Snowpack Drives Greenhouse Gas Emissions](#)
- Oct. 27 — [Nikki Lindt wants you to listen to the sound of the planet melting](#)
- Oct. 31 — [Natural Connections: Fall Colors and Caribou](#)
- Nov. 12 — [Second NASA sounding rocket launches from Poker Flat Research Range](#)
- Dec. 15 — [Researchers protest end of NSF grants program using data from its \\$1 billion ecology network](#)

- Jan. 4 — [A Major Climate Force Has Been Ignored for Decades](#)
- Jan. 14 — [True Detective: Is Tsalal Arctic Research Station a Real Place?](#)
- Jan. 22 — [Russian war on Ukraine hampers Arctic change predictions](#)
- Jan. 22 — [Why the war in Ukraine is bad for climate science](#)
- Jan. 23 — [The lack of data from Russia may render Arctic climate forecasting meaningless](#)

## Recent Toolik Community Research Publications

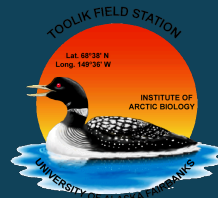
Contact us at [uaf-toolik-communication@alaska.edu](mailto:uaf-toolik-communication@alaska.edu) if you want to see your publication featured in our next newsletter. To view more community publications, go to our [publication database](#).

- Root-associated fungi and acquisitive root traits facilitate permafrost nitrogen uptake from warmed tundra, [Hewitt et al.](#)
- Pre-hibernation diet alters skeletal muscle relaxation kinetics, but not force development in torpid arctic ground squirrels, [Krishnan et al.](#)
- Towards an increasingly bias view on Arctic change, [López-Blanco et al.](#)
- Climate warming restructures food webs and carbon flow in high-latitude ecosystems, [Manlick et al.](#)
- Implications of alder shrub growth for alpine tundra soil properties in Interior Alaska, [Welch et al.](#)
- Aquatic CO<sub>2</sub> Concentration and Ecosystem Fluxes in Some of the World's Key Wetland Types, [Richardson et al.](#)
- Genomic evidence that microbial carbon degradation is dominated by iron redox metabolism in thawing permafrost, [Romanowicz et al.](#)
- Inland Waters can Act as Nitrous Oxide Sinks: Nitrous Oxide Undersaturation May Partially Offset Emissions, [Aho et al.](#)
- Hydrology Controls Dissolved Organic Carbon and Nitrogen Export and Post-Storm Recovery in Two Arctic Headwaters, [Shogren et al.](#)
- Small rodent population cycles and plants – after 70 years, where do we go?, [Soininen & Neby](#)
- Arctic Heatwaves Could Significantly Influence the Isoprene Emissions From Shrubs, [Wang et al.](#)
- A chromosome-level genome assembly of a free-living white-crowned sparrow, [Wu et al.](#)

To view all publications, visit our [Zotero library](#).

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Do you have an item to add to the quarterly newsletter?  
Send any additions or general suggestions/comments to Haley  
at [hdunleavy@alaska.edu](mailto:hdunleavy@alaska.edu).



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