



ROOM TO ROAM

Ecological forecasting tools for
movement-track management
at the Yukon-to-Yellowstone
migration corridor



ROOM TO ROAM

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Collaborators/End Users (many)

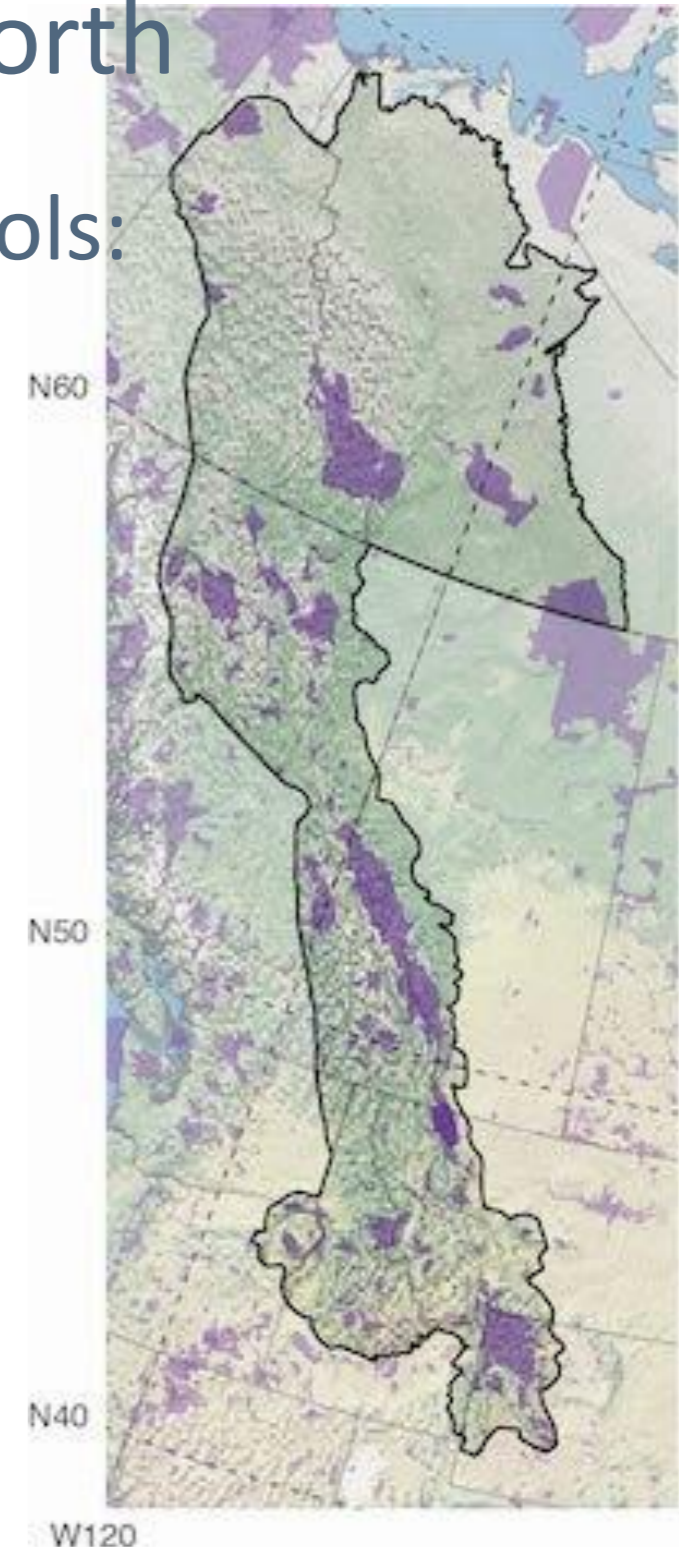
Objective: Build tools to support wildlife management and conservation in the Yellowstone-to-Yukon migration corridor of western North America

Our team is a coalition of those building these tools:

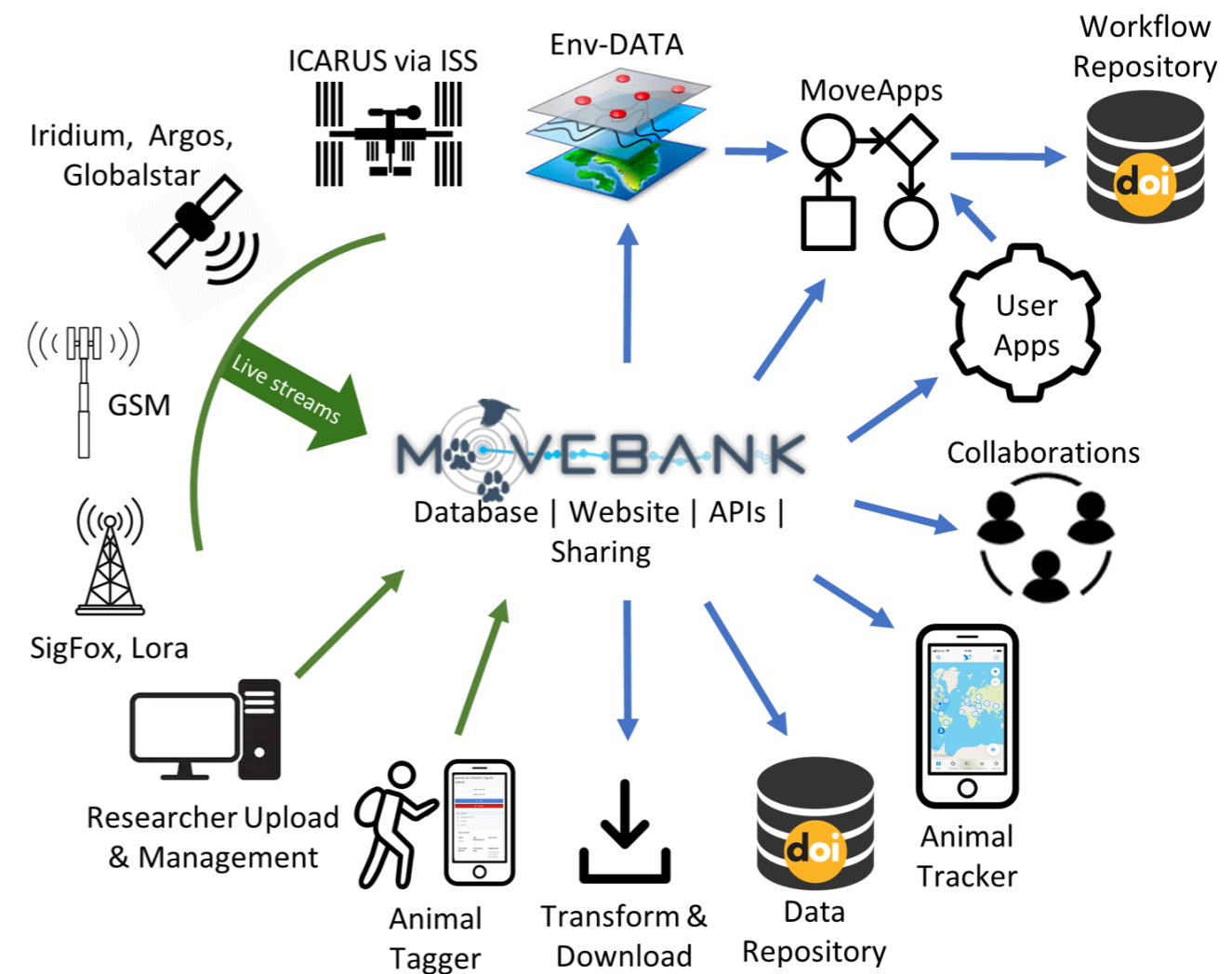
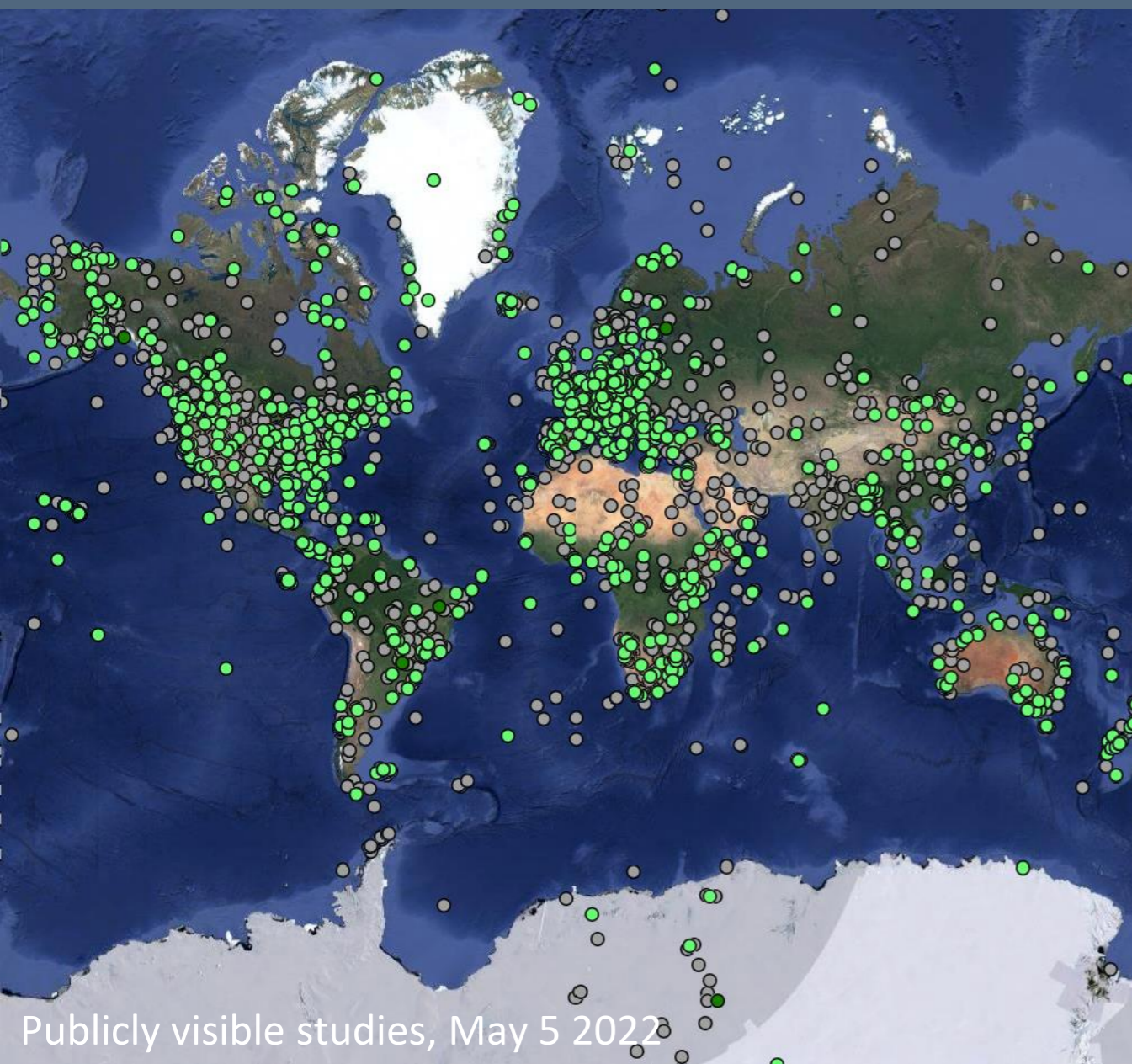
- Quantitative ecologists
- Application developers
- Data managers
- Outreach specialists

And those who will use the tools

- Wildlife and protected area managers
- Government agencies
- Ecologists
- Regional conservation NGOs



Partnering with Movebank a global database for animal tracking

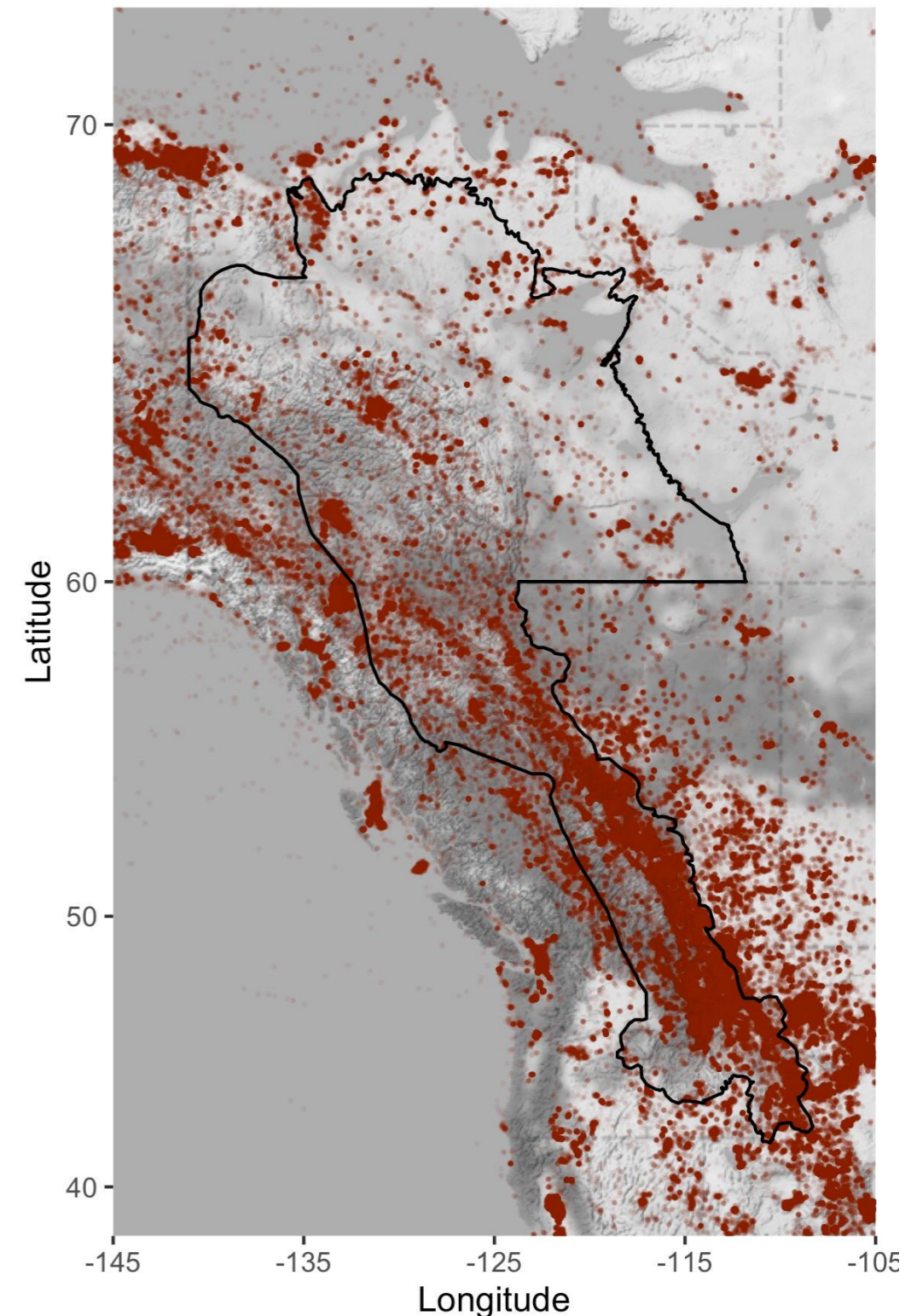


Publicly visible studies, May 5 2022

Goal 1: Harmonized Ground-Observed Animal Movement Archive for the Y2Y

- Shared protocols for data collection and management
- Joint discovery across organizations
- Public or controlled-access sharing

Partners can add to this archive over time and beyond the end of the project, providing a long-term resource for the region.



Goal 1: Y2Y Archive

Achievements

- Agency DSAs in place
- 33 partner studies on Movebank
- ~2M observations, growing rapidly



Goal 2: Identify and address partner needs for data management, data analysis and decision making in the region.



A female caribou and her calf from the Chisana herd. (Photo credit: Kathi Egli,, Yukon Government, Department of Environment)



Department of the
Environment,
Government of Yukon

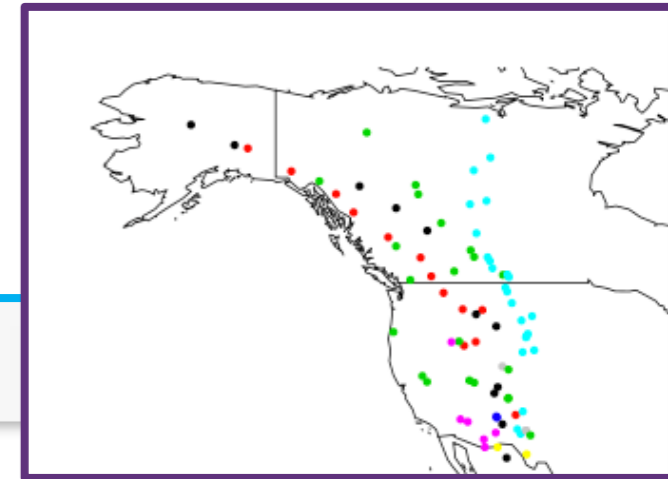
Goal 2: Identify Needs

Achievements

- 13 meetings with end users
- 67 needs identified
- Meeting in Whitehorse, Yukon, June 13–17



Goal 3: Develop tools within **Movebank.MoveApps**, for data analysis workflows, including harmonizing remote-sensing, reanalysis, and animal movement data



A screenshot of the MoveApps web interface. The top left shows the 'MOVEapps' logo. A sidebar on the left lists 'Workflows', 'Applications', 'Cloud Storage', and 'Documentation'. The main content area displays a workflow titled 'Golden eagles' with a 'Segmentation Example'. The workflow consists of four steps: 'Download' (using 'Movebank'), 'Prepare' (using 'thindata-byti...'), 'Classify' (using 'segmentdata-bys...'), and 'Map' (using 'points-on-m...'). A green 'START WORKFLOW' button is visible on the right.



Analyse without Code



Goal 3: MoveApps data analysis workflows



Golden eagles •
Y2Y Segmentation Example

> START WORKFLOW

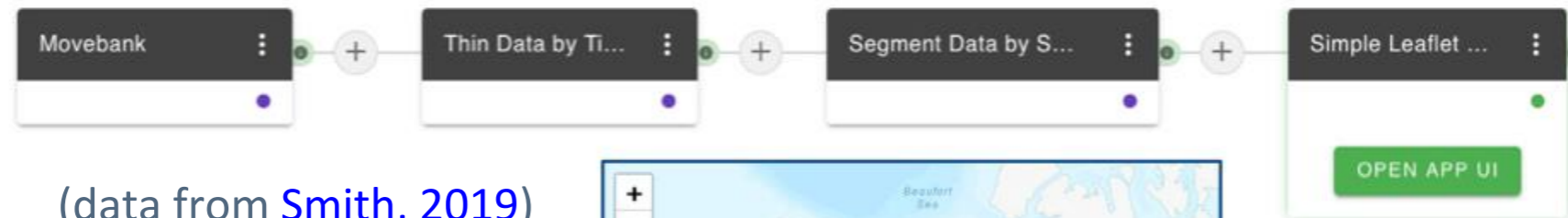
OUTPUT

Download

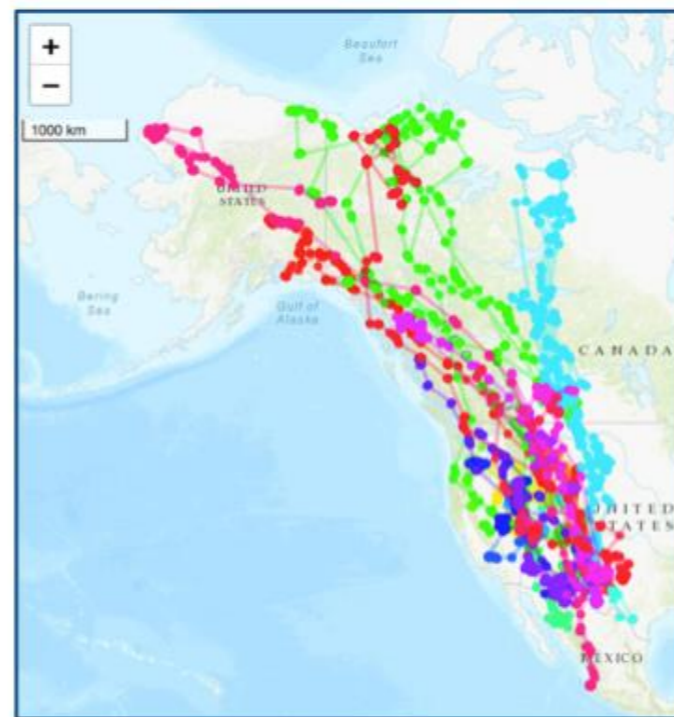
Prepare

Classify

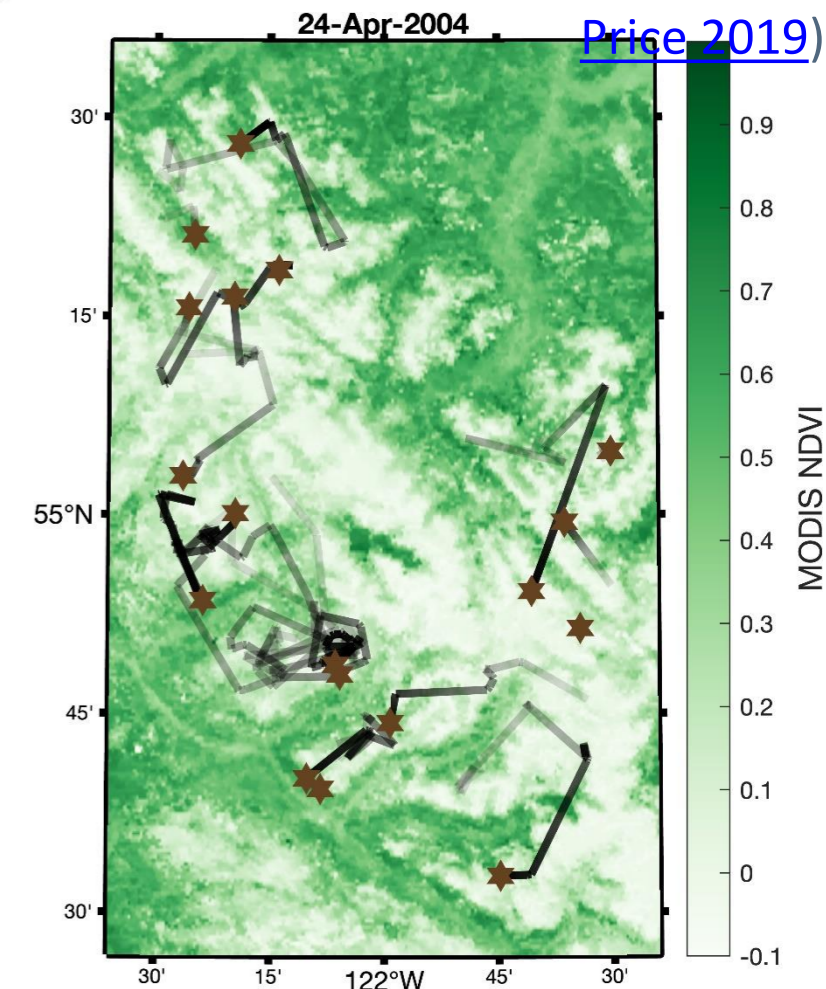
Map



(data from [Smith, 2019](#))



(data from [Seip & Price 2019](#))



Achievements:

App Development

- Identify calving events
- Identify carcass locations
- Assess road crossings/interactions
- Mapping and visualizing movements
- 20+ workflows that combine Apps, data sources

Goal 4: Expand our coalition to include other partners in the Y2Y region and complement existing

networks Achievements

- Communications Working Group
- Outreach to movement ecologists and wildlife managers in the region
- Next meeting, Sp 2025



Acknowledgements

Partners

Cover slide photo by Jacob W. Frank



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DLR



DFG Deutsche Forschungsgemeinschaft