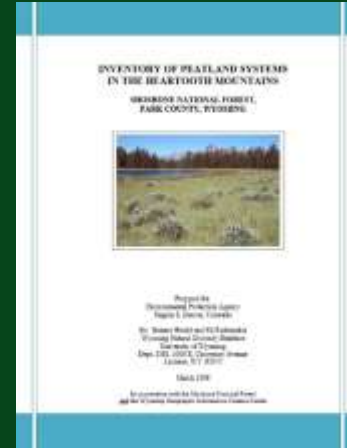
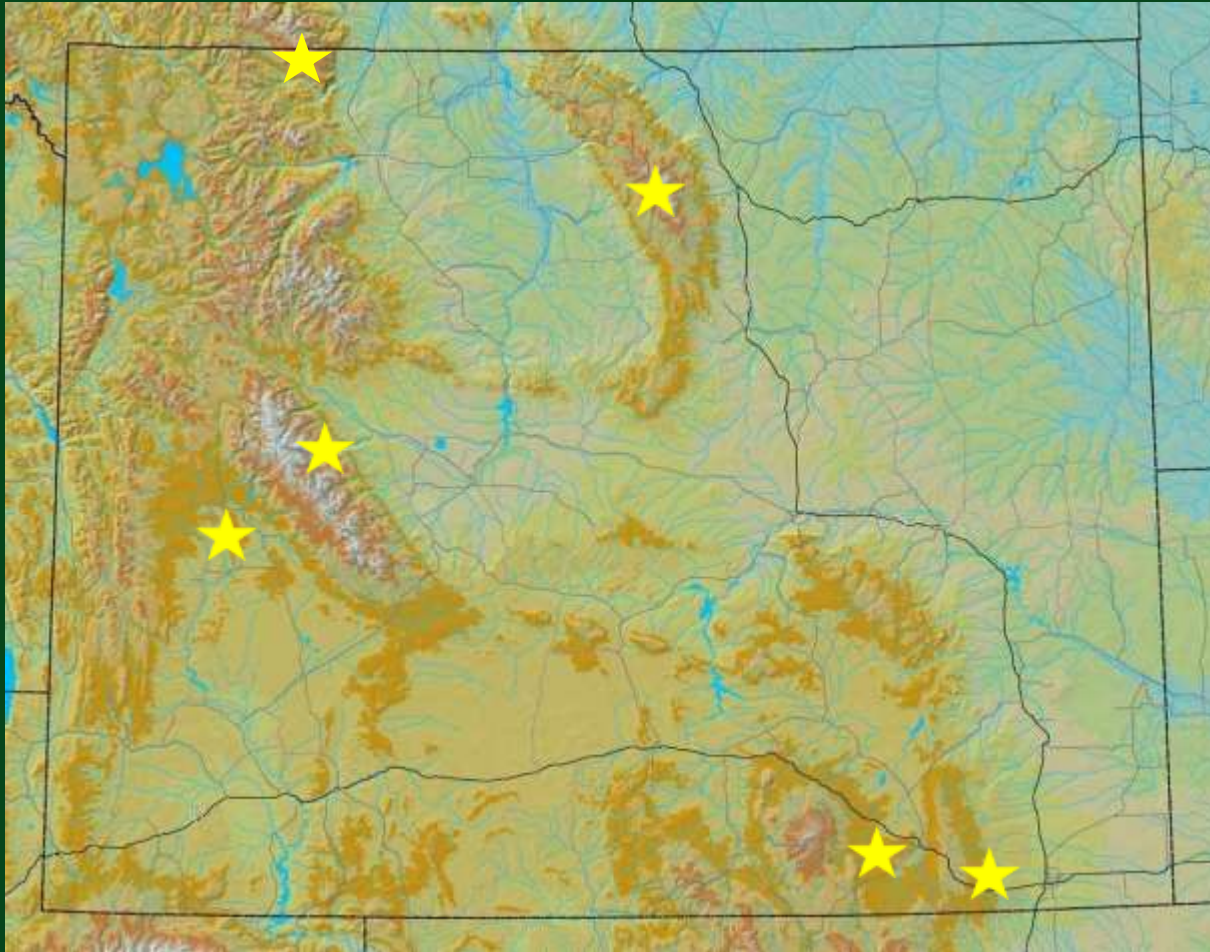


# UNIQUE CONTRIBUTIONS OF THE WYOMING FEN FLORA

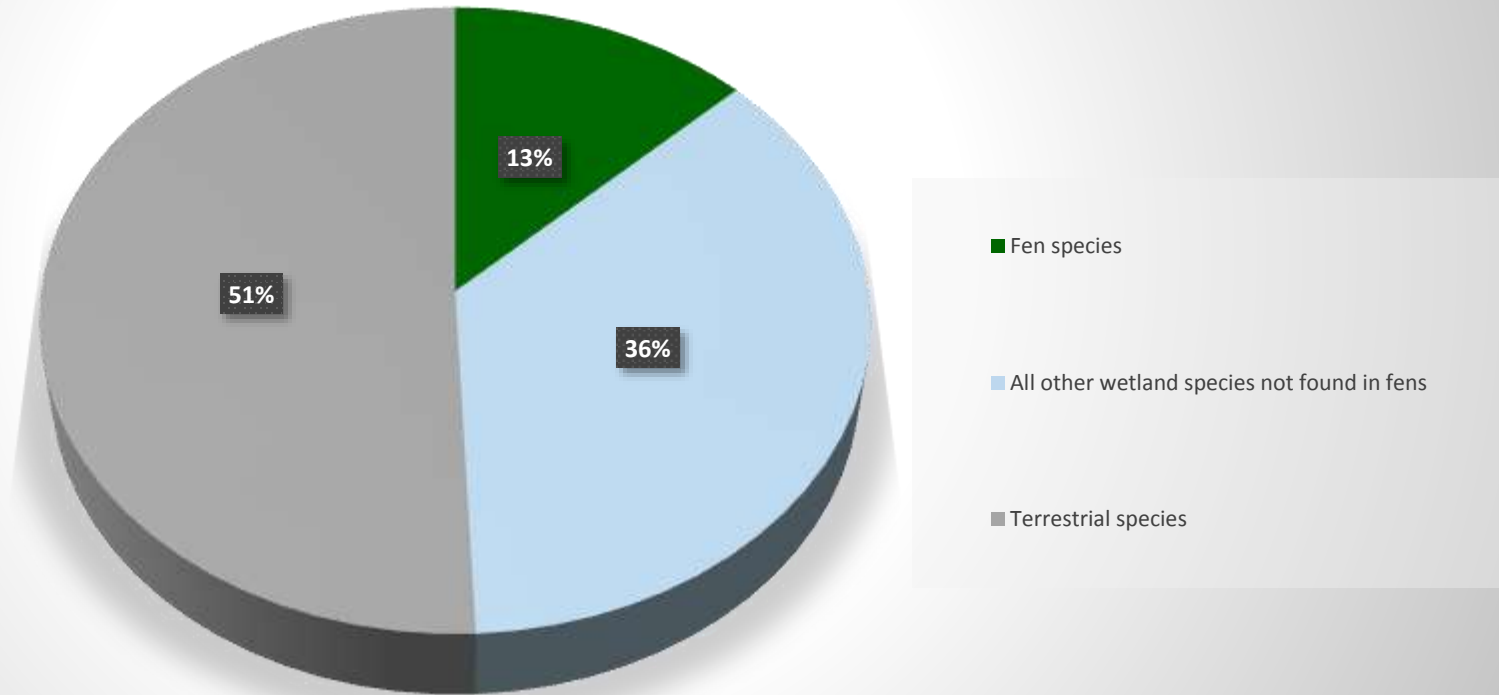
Bonnie Heidel

Wyoming Natural Diversity Database,  
University of Wyoming; [bheidel@uwyo.edu](mailto:bheidel@uwyo.edu)

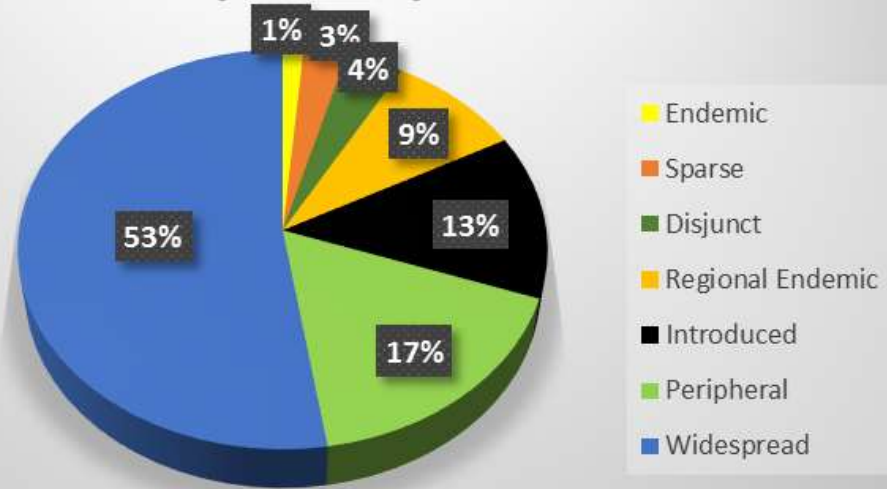
# WYNDD Rare Plant Surveys in Fens of Wyoming



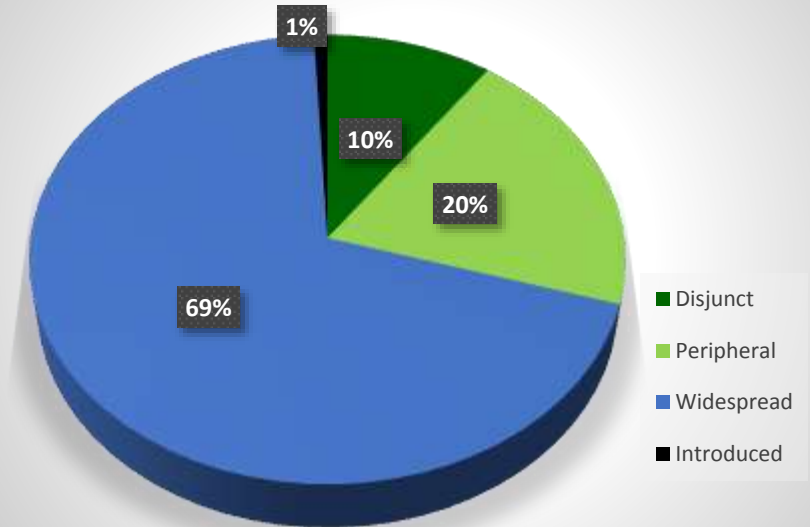
# Wyoming Fen Flora in the State Flora



## Biogeography of the Wyoming Flora (n=2800)



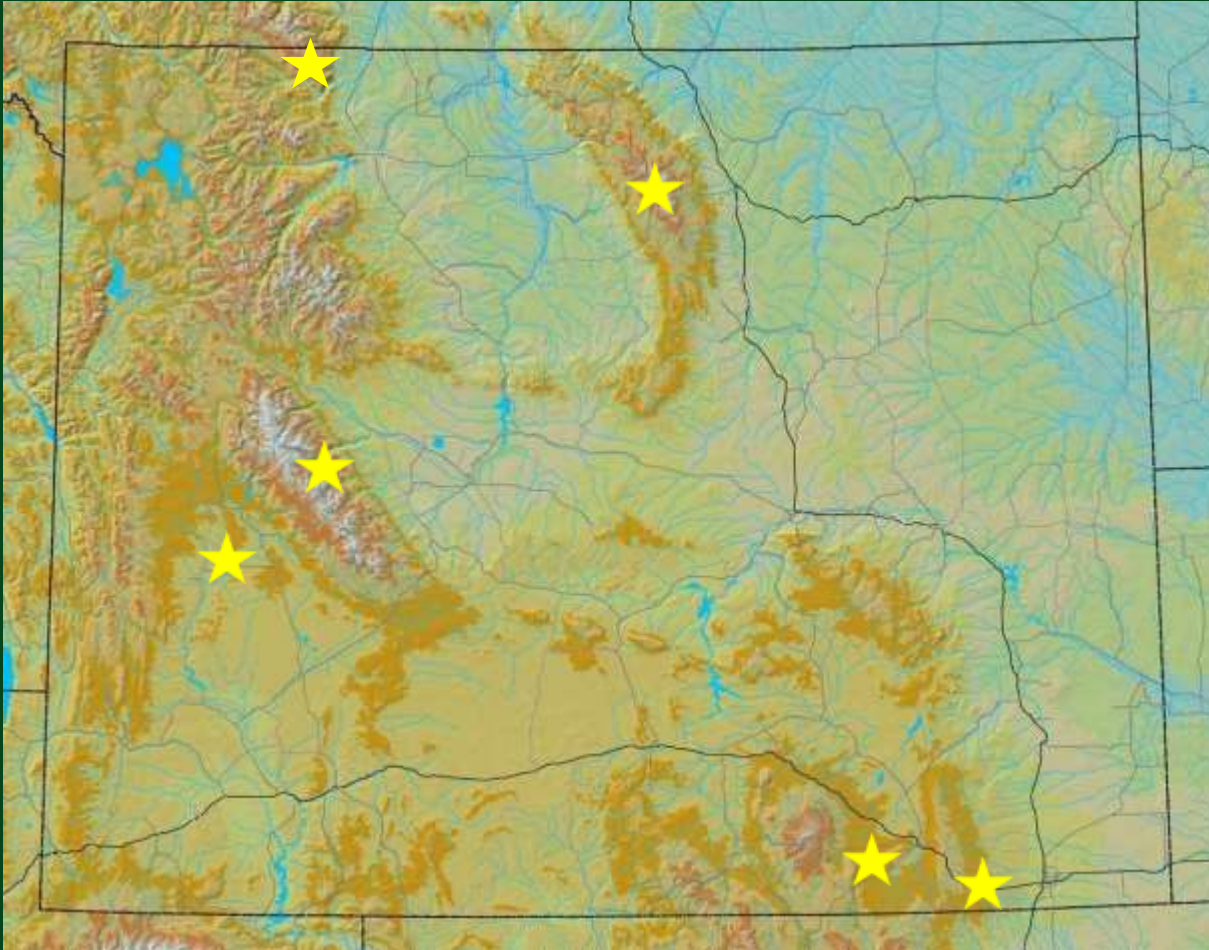
## Biogeography of Fen Flora (n=374)





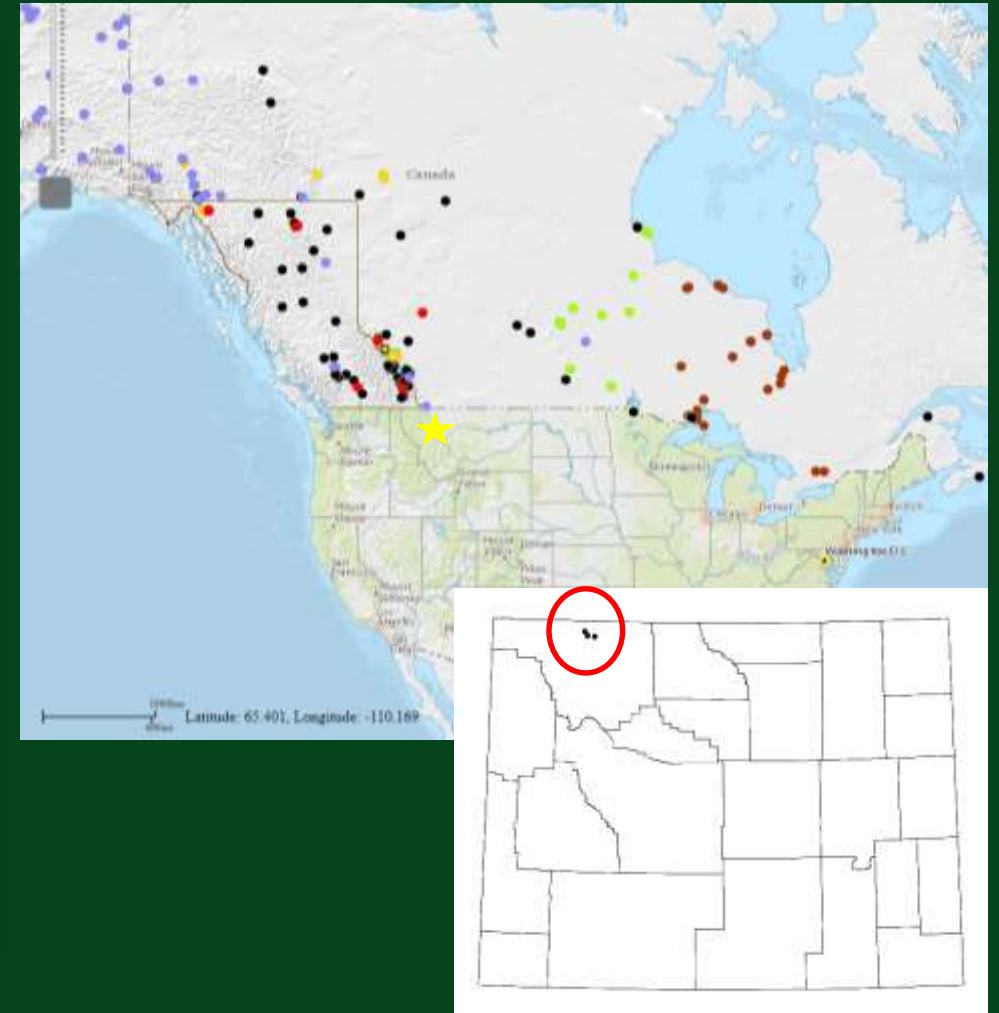
# Disjunct on a Continental Scale

400+ km north-south



Almost 600 km east-west

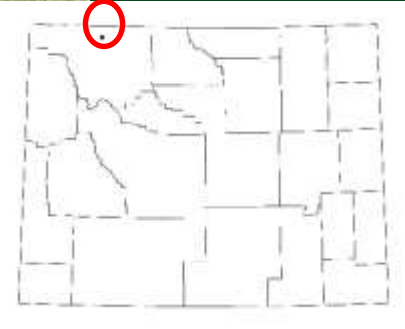
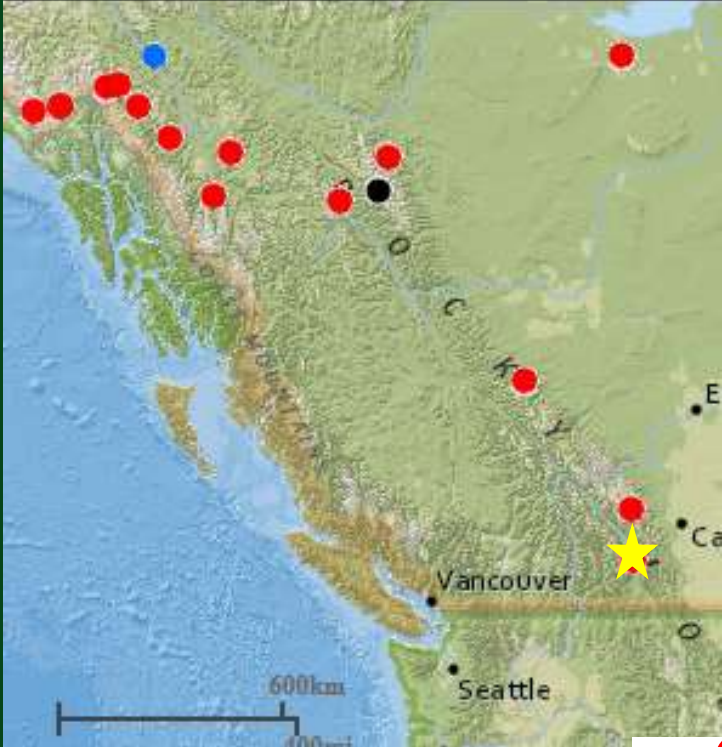
# *Amerorchis rotundifolia* (Roundleaf orchid)



Wyoming distribution: 4 populations in Park County  
Nearest population: Northwestern Montana

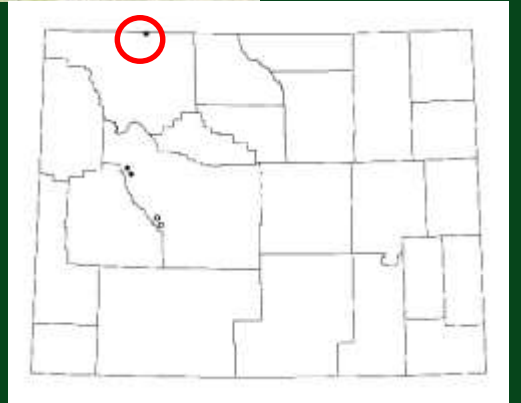


*Arctous rubra* (Red fruit bearberry)



Wyoming distribution: 1 population in Park County  
Nearest population: Southern Alberta

# *Eriophorum callitrix* (Arctic cottongrass)

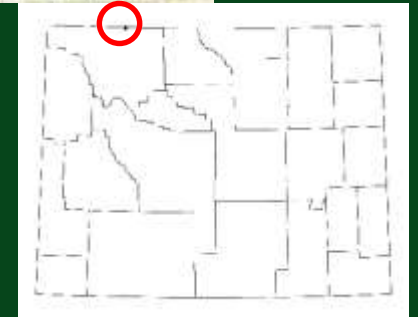


Wyoming distribution: 5 populations in Park and Fremont Counties

Nearest populations: Beartooth Mtns of Montana, and then Southern Alberta



# *Salix barrattiana* (Barratt's willow)



Wyoming distribution: 1 population in Park County, WY  
straddling the Montana state line  
Nearest other population: Southern Alberta

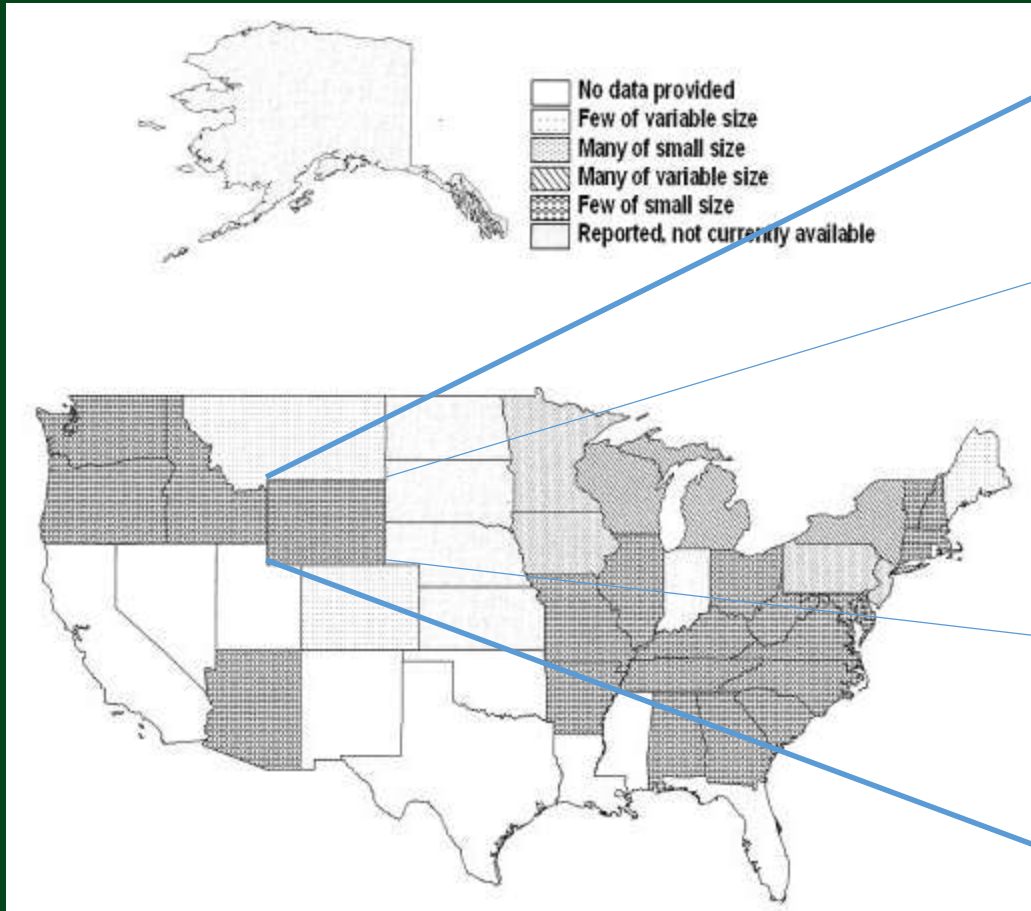
# *Salix serissima* (Autumn willow)



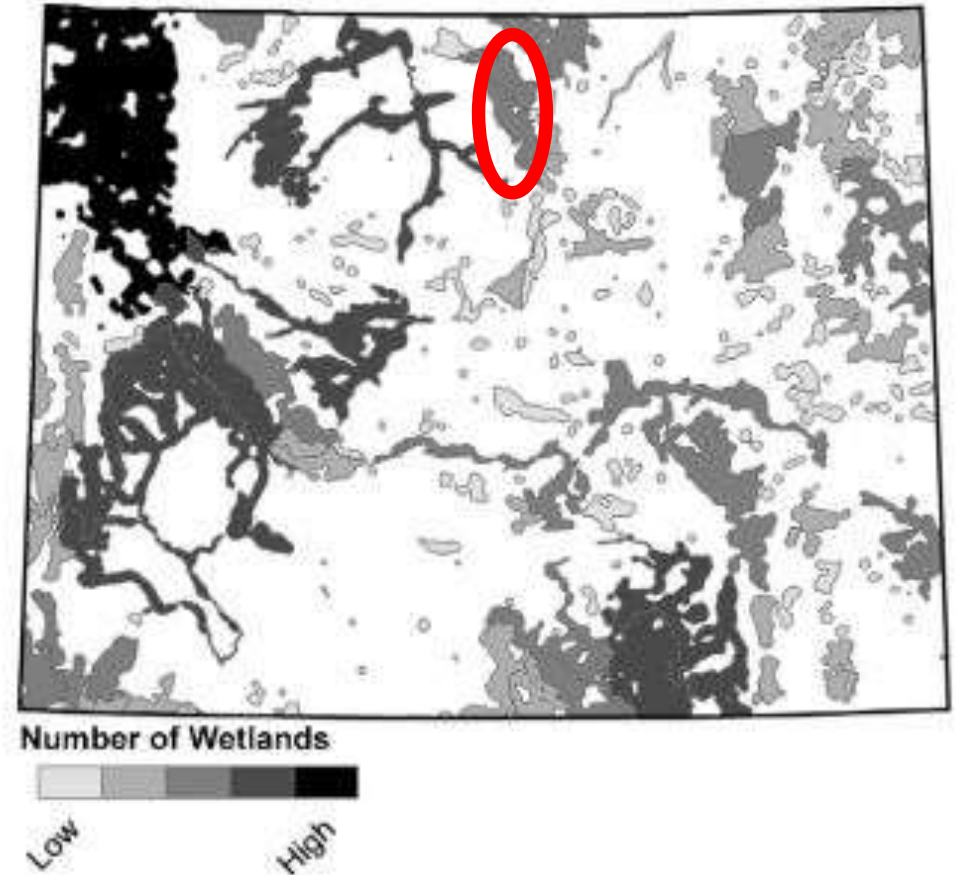
Wyoming distribution: four populations in Albany County  
Nearest populations: Northwestern Montana; also north-central Colorado and Black Hills of South Dakota



# Fens as the “unknown wetland type” in Wyoming



Fens in the conterminous United States and Alaska.  
From Bedford and Godwin (2003)

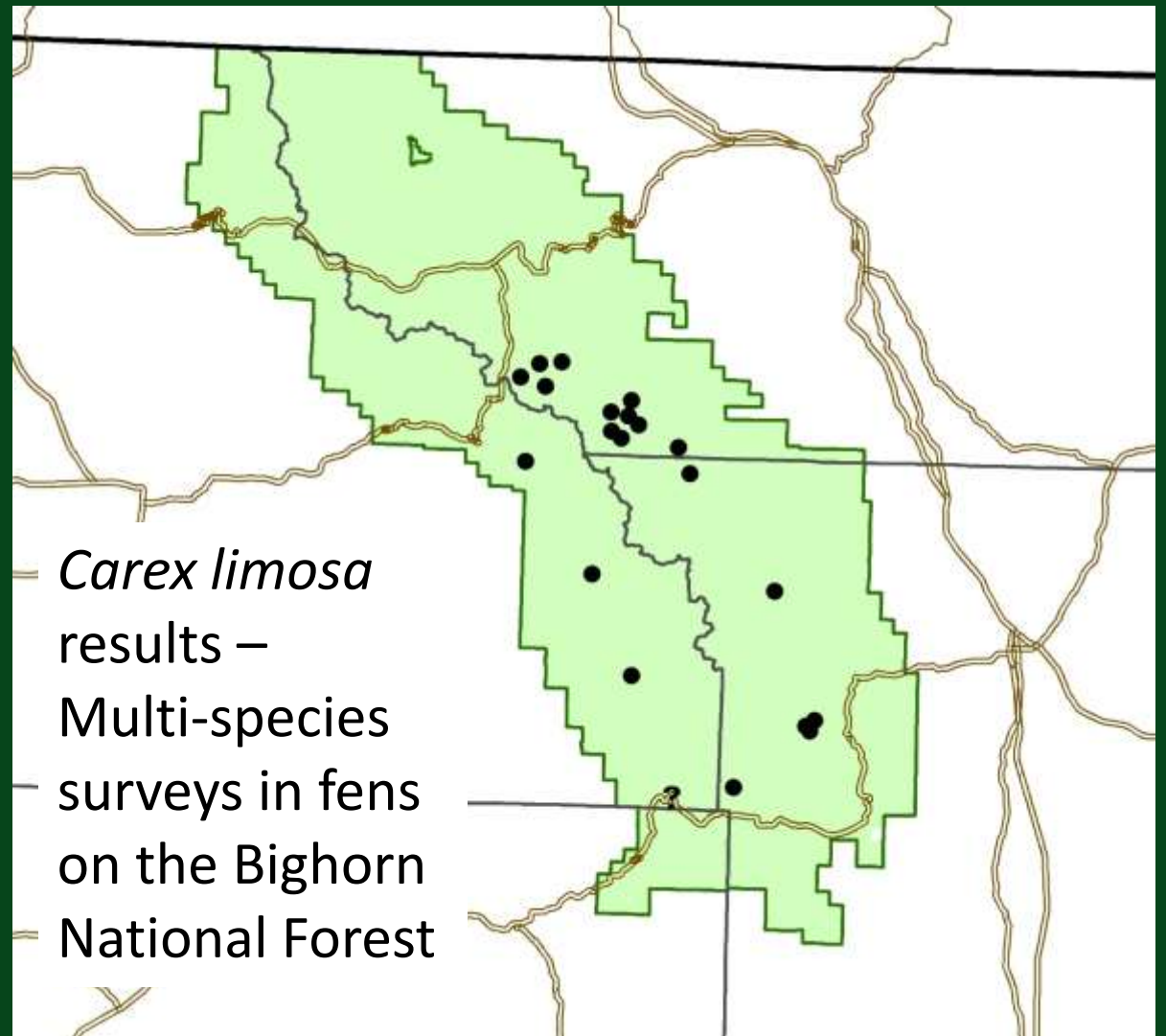


Wetland density in Wyoming, based on NWI. From  
Copeland et al. 2010.





## *Carex limosa* (Mud sedge)







The two most important environmental gradients affecting the floristics, vegetation and productivity of peatlands (Jeglum 1974) are:

- Moisture-aeration
- pH-nutrient





*Drosera anglica* (English sundew)

## Wyoming Fen Flora Contributions



- Major component of the state and regional disjunct flora



*Drosera anglica* (English sundew)

## Wyoming Fen Flora Contributions



- Major component of the state and regional disjunct flora
- Disjunct species that are biogeographically exceptional

*Drosera anglica* (English sundew)

## Wyoming Fen Flora Contributions



- Major component of the state and regional disjunct flora
- Disjunct species that are biogeographically exceptional
- *Composition uniqueness insofar as rarest species have high fidelity to fens*



*Drosera anglica* (English sundew )

## Wyoming Fen Flora Contributions



- Major component of the state and regional disjunct flora
- Disjunct species that are biogeographically exceptional
- *Composition uniqueness, with rarest species of high fidelity to fens*
- *High species diversity for Wyoming wetlands*





*Trichophorum pumilum*  
(Rolland's bulrush)





United States Department of Agriculture

## Fens and Their Rare Plants in the Beartooth Mountains, Shoshone National Forest, Wyoming

Bonnie Heidel, Walter Fertig, Sabine Mellmann-Brown,  
Kent E. Houston, and Kathleen A. Dwire



Forest  
Service

Rocky Mountain  
Research Station

General Technical Report  
RMRS-GTR-399

September 2017

[For more information](#)

<https://www.fs.usda.gov/treesearch/>

<http://www.uwyo.edu/wyndd/>

[bheidel@uwyo.edu](mailto:bheidel@uwyo.edu)



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