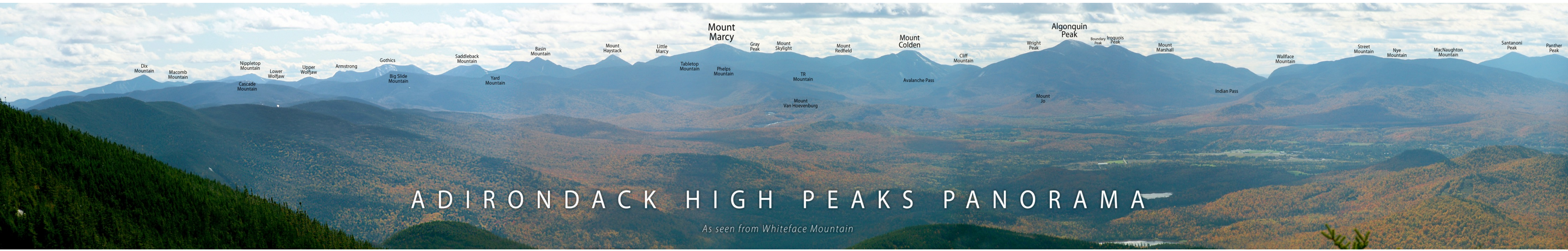


# Alpine Vegetation in the Adirondacks (New York)

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**Introduction:** Alpine zones are high mountain environments with limited vegetation and weather conditions comparable to arctic regions. The types of vegetation found in alpine zones are unique because they have adapted to the extreme environment. Various types of shrubs are commonly found in the alpine region of the Adirondacks because of their ability to resist frost and desiccation, and they often grow low to the ground and stay relatively small at their full size. Many alpine zones are a part of national and state parks or protected areas, such as the 85 acres found across 12 mountain summits in the Adirondack Park of New York State. The purpose of this project was to map the prevalence of unique alpine species on Adirondack alpine summits. It emphasizes the spatial patterns of these species and where they are most and least commonly found.



Lapland Rosebay



Bigelow's Sedge



Black Crowberry



Alpine Sweetgrass



Alpine Goldenrod



Diapensia



Highland Rush



Bearberry Willow



Figure 2. Adirondack Park and High Peak Region boundaries

**Data and Methods:** Data were recorded from iNaturalist, a citizen science platform, on eight species of rare alpine vegetation: Lapland Rosebay (*Rhododendron lapponicum*), Bigelow's Sedge (*Carex bigelowii*), Black Crowberry (*Empetrum nigrum*), Alpine Sweetgrass (*Anthoxanthum monticola*), Alpine Goldenrod (*Solidago leiocarpa*), Diapensia (*Diapensia lapponica*), Highland Rush (*Oreojuncus trifidus*, and Bearberry Willow (*Salix uva-ursi*). After selecting the species, data were collected from each alpine summit and organized into a data table, showing how many times each species was observed on each summit. Summits were mapped and results were presented as a proportional-symbols pie-chart map.

**Results:** Mountains Whiteface, Algonquin, and Wright had the highest numbers of unique species observed: Whiteface (69), Algonquin (29), and Wright (26). Species Diapensia, Alpine Goldenrod, and Bearberry Willow were observed the most often: Diapensia (34), Alpine Goldenrod (34), and Bearberry Willow (27).

**Conclusion:** Generally, mountains with higher elevations have more observations and unique species because of the larger alpine zones they contain. This is true based on the results of this research project. Some species such as Arctic Bentgrass, Snowbed Willow, and Tundra Dwarf Birch were listed as rare but did not appear in iNaturalist data. The map highlights the rarity and fragility of alpine vegetation on Adirondack alpine summits.

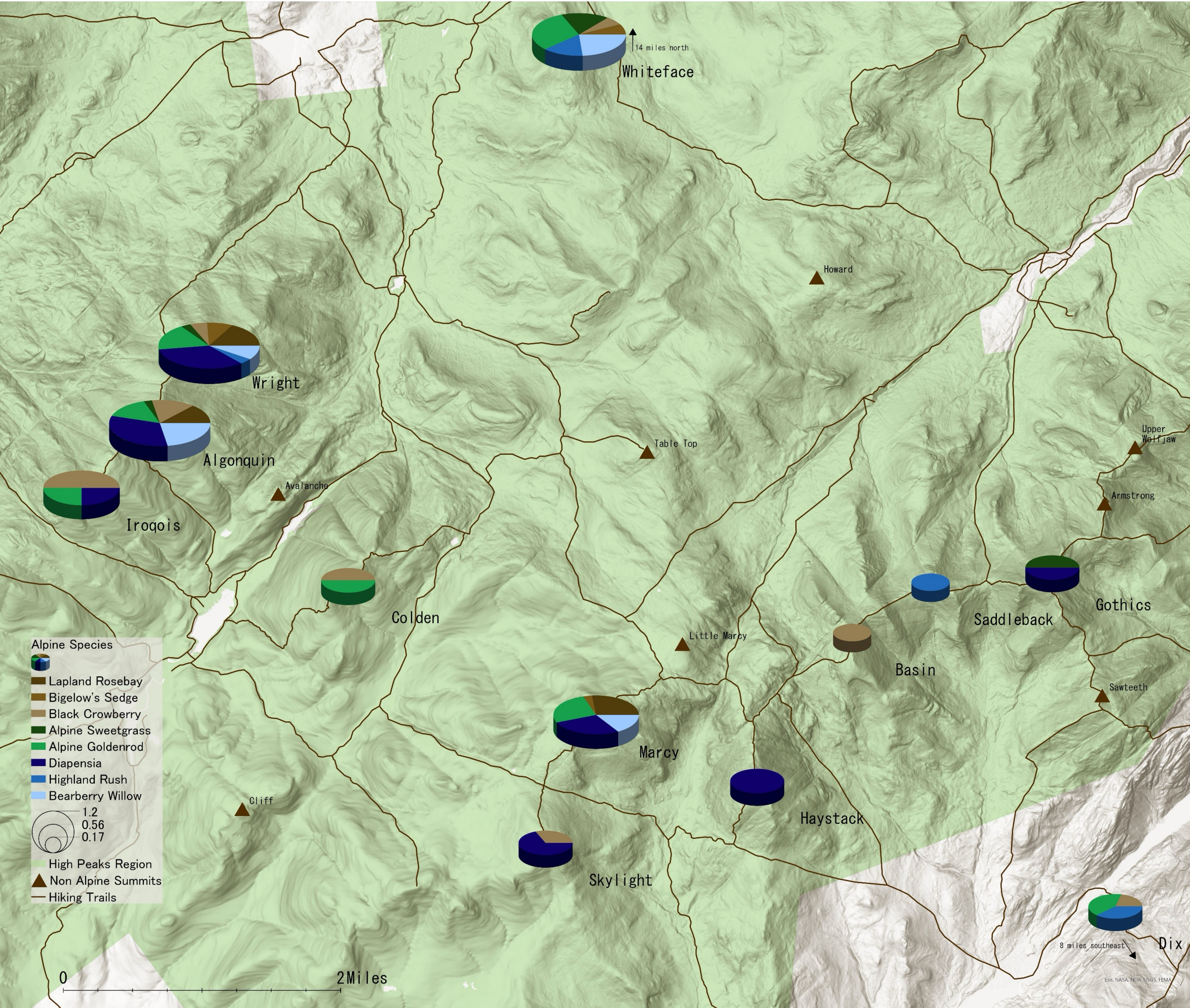


Figure 1. Rare alpine species graphed as pie-charts throughout the High Peaks

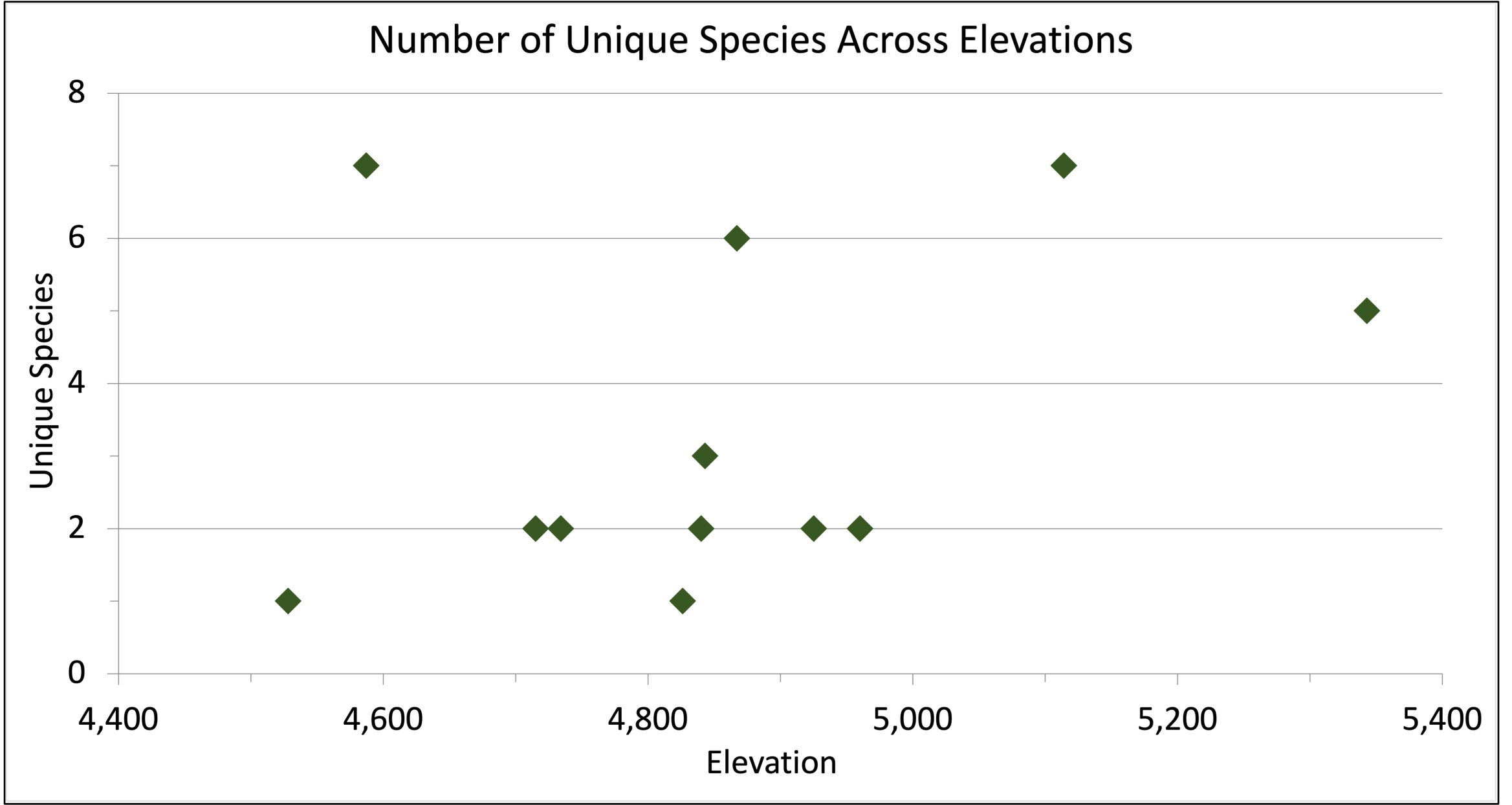


Figure 3. The number of unique species observed across different elevations

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