Revegetation using cushion plants after recreational trampling on a Colorado fourteener

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Recommended Citation  
Kleier, Catherine; Kreb, Rachel; and Kintgen, Mike, "Revegetation using cushion plants after recreational trampling on a Colorado fourteener" (2019). *Celebration of Scholarship and Research*. 26.  
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Revegetation using cushion plants after recreational trampling on a Colorado fourteener

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Acknowledgements
American Alpine Club & Colorado Native Plant Society for financially supporting my research.
Colorado Fourteeners Initiative for trial of new restoration technique at Mount Yale.
Mike Kintgen for help with statistical analyses.
Dr. Kristofder Voss for help with statistical analyses.
Fieldwork Volunteers: Ryan Keating, Cameron Christmas & Kaki Flynn.

Are cushion plants strong candidates for alpine trail revegetation?

- Can they be transplanted after trampling?
- Do they transplant as well as grasses?
- Which cushion species recovers best and supports the most diverse canopies?
- Does facilitation change if conditions get too stressful?

Methods

Cushion plants vs. grasses

Facilitated plant communities

Did cushion plant transplants survive well?

Comparing cushion plant species

- Most commonly found
- Least commonly found
- Other

References


Discussion

- Transplanting mature cushion plants is not recommended as most died after only seven years.
- However, young recruits recovered well and may establish well enough on their own without active restoration.
- Cushion plant species did not facilitate distinct non-cushion plant species.
- Therefore, revegetation efforts should focus on the cushion plant species that recovers the best and contributes the most plant cover.
- Minuartia rubella became the most dominant in the trail community.
- Inconsistent with the stress gradient hypothesis, cushion plants did not facilitate more in stressed areas.
- Future studies are needed to:
  - Research new alpine revegetation techniques (seeding, transplanting younger plants)
  - Understand alpine succession following disturbance.