



## Land Access as a Barrier to Seed Collection

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Most plants that restoration practitioners are putting in the ground this winter and spring were grown from local seed sources, often hand collected by a very small, highly knowledgeable network of seed collectors. The practice of collecting and propagating native plants is ancient, but the scale at which ecosystem restoration is happening is increasing to match the pressures felt by land development, loss of biodiversity, and the cascading effects of climate change. As nurseries scale up production to meet the demands for native plants, they are looking to both in-house and independent seed collectors to ensure that the stock they grow and sell maintains the necessary genetic diversity to stand up to all of the challenges that ecosystems are facing.

The complex interaction of threats that make ecological restoration necessary also pose challenges to seed collection. The intimate knowledge of ecosystems, phenology and genetic interactions between plant populations that seed collectors hold is often at odds with the pressures of modern economies of scale and an increasingly fragmented landscape.

As ecosystems experience stress caused by climate change some populations may respond with increasingly unpredictable seed crops, and in a landscape of mixed ownership with varying degrees of regulation around access, it can be difficult for collectors to adapt to these changes. If a collector only has access to one or two sites where a particular species grows and those sites experience a disease or insect outbreak, the collector may

have to scramble to find another site (and go through the permitting process attached to it) or be forced to forgo collection for that species altogether. Applied across a landscape that is responding to climatic shifts in different ways, this has the potential to cause serious disruptions in native plant seed availability and impact production.

Access to land is emerging as a significant barrier to seed collection. Many seed collectors rely upon their own networks and navigate the complicated permitting system of numerous land management agencies with little to no guidance. Collection may occur on a combination of public and private lands including properties managed by:

- Land trusts
- Tribal lands
- State agencies
- Federal agencies
- Counties, cities and regional parks
- Private landowners and businesses

Concerns held by land owners regarding granting access to lands include:

- Privacy
- Fire risk
- Endangered Species Act listed species
- Liability
- Logistics (eg gate access, multiple user conflicts, timing uncertainty)

Mitigating actions seed collectors take to address concerns include:

- Taking detailed notes about species population growth/decline and vigor year after year
- Removing invasive species
- Advocating for protection of populations from incompatible uses
- Reporting stewardship needs to land managers, or carrying out this work themselves

**“There is a scarcity of seed collection areas in the lowlands to provide stock for our restoration sites, so it would be helpful to have permission to collect from as many conservation landowners as possible.”**

- Brenda Clifton, Senior Restoration Botanist at Skagit River System Cooperative



The saponins in buffalo berry (*Shepherdia canadensis*) cause extensive foaming while these seeds are being cleaned. Photo Credit: Georgia Mitchell

“The timeliness for permit approval and native seed collection can be challenging to align each year. Federal, State, and private landowners all have different requirements and there is no database that clearly outlines application deadlines, contacts, costs, and land access limitations...

Some state agencies take up to three months to process permit applications, whereas other agencies limit access to scouting before the permit is in hand. In addition, there is a lot of misinformation regarding botanical surveys and some private landowners are reluctant to give approval. These limitations, while sometimes valid, can mean the difference between preserving genetic diversity and losing it.

There is also an intricacy to seed collection that is driven by the seasonality of flowering windows. When seed collectors are limited by the permitting process, we miss the opportunity to evaluate population health and vigor. Last April I collected *Montia linearis* on contract for a production field. As the funding was being approved the plants were already setting seed and I still needed to locate populations and contact landowners for approval. Luckily, this species ripens indeterminately and I was still able to meet the deliverable requirements but it was close. This is a common dynamic between the approval process and the sometimes-small collection window available. Streamlining this process or encouraging more collaboration among seed collectors, federal, state, and private landowners would greatly ease the collection process making more plant material available to the restoration industry.

We are at a crucial point with climate change and our responsiveness is needed more than ever. It is pertinent that we continue this work but with urgency, while working together and providing a holistic approach to land stewardship.”

- Emily Wittkop, Jonny Native Seed



## Communication Informs Timely Trail Maintenance

One seed collector has gathered seeds along a publicly accessible trail for many years, but recently, user groups have started brushing these herbaceous plants before seeds have had a chance to ripen. As someone who monitors these plants closely, the collector has documented this loss and advocated for later trail brushing to the managers of the natural area. This way, the trail continues to be maintained for multi use purposes and the plants are allowed to complete their life cycle which in turn supports native fauna and provides seeds for ecological restoration.



Purple fruit season.  
Photo Credit: Georgia Mitchell

### Questions for future consideration:

What actions could we take to open access to key collection sites while addressing landowner concerns?

What lands/landowners are the most significant priorities for obtaining permissions for seed collection?

What barriers exist to implementing a cross-agency permission system?

How can public land managers address concerns about commercialization of resources in support of longer-term ecological restoration?

What roles could smaller organizations and landowner groups play in supporting access to qualified seed collectors?

Would an association or guild of seed collectors promote more streamlined permission models?

Would it be possible to add conservation of native seed resources to the list of values for which land managers are actively managing?