

Mt. Baker-Snoqualmie Botany Program Accomplishment Report Fiscal Year 2000

Rare Plants and Plant Communities

Monitoring

Triangular-lobed moonwort (*Botrychium ascendens*) on the Nooksack Cirque Road. This species is listed as a “Species of Concern” by the USFWS, and it’s an R6 Sensitive species. From 1991-1996 we monitored several different species of *Botrychium* along this road, but in the past couple of years we’ve decided to focus on just this one species because it is more rare than the others. Each year it has occurred in a tight cluster comprised of about 10 individuals (probably clones). In FY2000, there were no individuals present, and the other more common species of *Botrychium* nearby seemed smaller than usual. We don’t know the reason yet - the monitoring site was visited at the usual time (around the 1st week of July). Perhaps the very late spring snowfall resulted in delayed emergence of the *Botrychium* in 2000.

Obscure Indian Paintbrush (*Castilleja cryptantha*) in Mt. Rainier Nat’l Park. The best way to learn to find a rare species is see it growing in its natural habitat so you have a clear search image. We assisted MRNP botanists conduct their annual monitoring of *Castilleja cryptantha* at known sites, thus greatly improving our ability to find it, checking out their monitoring techniques, and building a stronger partnership with our next door neighbor to the south.

Mountain moonwort (*Botrychium montanum*) on Mather Memorial Parkway. This little fern is a Survey & Manage species. Before the Mather was widened, there were 2 patches of this species growing in old-growth forest on opposite sides of the highway, and we agreed to monitor them for several years after construction. In 2000, the population remained more or less stable on the west side of the highway. The population on the east side of the highway seems to have been destroyed by a higher water table resulting from the construction process. We have checked each year but *Botrychium montanum* has not been able to re-establish itself on the east side highway.

Stalked moonwort (*Botrychium pedunculosum*), and other species on the Iron Goat Trail. This moonwort is listed as a “Species of Concern” by the USFWS, and it’s an R6 Sensitive species. We have two permanent monitoring plots in the old town site of Wellington. One plot has stalked moonwort, but it has not appeared for several years, including year 2000. *Botrychium* species are known to “go dormant” for a few years at a time, so we’ll have to track this plot for several more years before we can conclude the fate of this plant. The other monitoring plot has 2 survey and manage species: *Botrychium montanum* and *Botrychium minganense*, and the populations appeared stable in 2000.

The Region borrowed an MBS botanist for a couple of weeks to work on the Gifford Pinchot NF as part of the Regional “strategic survey” effort to gather more information about Survey and Manage bryophytes.

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Research Natural Areas

Our RNA stewardship partnership with The Nature Conservancy (TNC), began last year, and was extended in FY2000 to include the Perry Creek RNA as well as the Lake 22 RNA. TNC recruited 23 volunteers; some were new to the program and some had participated last year. They contributed approximately 600 hours of service time. The TNC's volunteer coordinator dedicated about 20 hours of her time to the project as well as providing supply kits for the volunteers. We plan to continue this program in FY2001.

Another area of emphasis this year and next will be helping design and then monitor the reconstruction work planned for the Lake 22 Trail. The final design must be consistent with the Lake 22 RNA Management Plan. Contracted work will occur immediately adjacent to extensive populations of Sensitive and Survey/Manage plant species, and avoiding impacts will require a coordinated effort between the botany program and the trails program.

New Sightings

In FY2000 we discovered new sites for:

Species	Common name	# of sites	Location
<i>Bondarzewia mesenterica</i>	S&M fungus	1	Dorothy Lake Trail
<i>Lycopodium dendroidium</i>	treelike clubmoss	1	Cliffstone Mine, North Fork Snoqualmie River
<i>Schistostega pennata</i>	goblin's gold moss	4	S Fk & Enumclaw KV Rd Decommissioning
<i>Habenaria orbiculata</i>	round-lvd rein orchid	2	Funnybone and Forgotten timber sales on DRD
<i>Pseudocyphellaria rainierensis</i>	S&M lichen	1	Whitechuck River valley
<i>Lobaria linita</i>	S&M lichen	1	Lake 22 RNA
<i>Hypogymnia duplicata</i>	S&M lichen	1	Lake 22 RNA
<i>Allotropa virgata</i> new extension of a known population	Candystick	1	Glacier Peak Wilderness, Pacific Crest Trail
<i>Galium kamtschaticum</i> new extension of a known population	boreal bedstraw	1	Lake 22 RNA

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Noxious Weeds

- The Forest entered into a new partnership with the Snohomish County Noxious Weed Board and Wildlands Management whereby they helped us implement the 1999 Forest Wide Noxious Weed EA by treating several especially problematic weed sites along the Mountain Loop Highway and several side roads accessed from the Mountain Loop. In FY2000 the Snohomish County Noxious Weed Board donated about 76 hours of labor + about \$200 worth of herbicide (Rodeo). We contracted with Wildlands Management, but they also donated time and materials far beyond the call of duty, e.g. an 18 mile hike and about 40 hours of donated time. We are trying to get funding to continue this very successful partnership in FY2001.
- We continued our long-term partnership with Whatcom County Weed Control by hand-pulling tansy ragwort along the Mt. Baker Highway. The population continues to show significant decline. We also made sure that weed control provisions were included in the easement to the State for the Mt. Baker Highway, currently being drafted.
- A new alliance of partners has formed to take on the Japanese knotweed invasion in the upper Skagit (including the Sauk and Suiattle Rivers). The Nature Conservancy is the lead on this, with the Park Service, Forest Service, County Weed Boards, Seattle City Light, and interested citizens participating. The objective is to begin formulating a plan for eradicating knotweed in this watershed, and then find ways to implement it.
- An Eagle Scout project by a local Boy Scout will result in hand-pulling a newly discovered population of orange hawkweed along the Whitechuck Road. In FY2000, he hand-pulled a couple of small infestations. In FY2001, he plans on bringing his entire troop to the site to pull these plants.
- Since we have botanists looking at timber sale areas, we're able to spot existing noxious weeds in time to get their treatment into KV plans. This is a new opportunity to fund weed control that was usually lost before.
- North and South Zone botanists both attended two days of pesticide applicators license recertification training to keep their State license current through 2004.
- "Certified" Weed Free straw contract language. Forest Plan Amendment #13 directs us to implement the Best Management Practices outlined in the 1999 Forest Wide Noxious Weed EA. One of these actions is to use weed free straw for erosion control, but there was no clear direction on how to ensure that the product meets MBS standards. The Botany program has been working with county weed

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boards, growers, and our Engineering and Contracting shops come up with language suitable for restoration contracts.

- Pulled a couple of acres worth of sulfur cinquefoil (*Potentilla recta*) at Sauk Boat Launch with help of the 2 DRD river rangers.
- In FY2000, we continued our multi-year spray contract for tansy ragwort on Road 70 and in an adjacent noble fir plantation. In FY2000 we also added a knapweed patch on the 70 Road.
- Assisted Kittitas County Noxious Weed Board in herbicide spraying Hyak area roadsides for orange hawkweed. The Kittitas County Noxious Weed Board donated about 16 hours of labor + about \$200 worth of herbicide (Dicamba).
- Worked with a Mt. Si High School group to pull an acre of knapweed at Gold Creek Pond.

Training and Scientific Contacts

All 3 botanists attended a 5-day bryophyte training in Forks. We improved our skills a lot, but this is probably a life-long effort.

All 3 botanists attended a 3-day ISMS database training. We are still having headaches, as the database is new and still full of program glitches.

The south zone botanist completed a 5 credit mycology course at Central Washington University (10 weeks) on personal time.

The forest botanist presented a paper at a scientific conference on Washington rare plants and ecosystems held at U of WA. The paper was titled "The Rare Flora of Lake Isabel, Washington". Proceedings are in press.

Environmental Education

We continued our partnership with North Cascades Institute to provide training to educators so they can implement the Celebrating Wildflowers Curriculum with their students. In FY2000 we offered workshops in Wenatchee and Tri-Cities, which were enthusiastically received. The biggest challenge was finding live native plants amongst all the cheatgrass and knapweed.

The Darrington wildflower quilt was displayed for the second year in a row by the Regional Office at the Celebrating Wildflowers event in Portland.

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This was another successful year for the annual Wildflower Festival in Darrington; its ninth year. We were able to find volunteers to lead 7 walks at the Festival, which were attended by 34 people. Some serious consideration of how the Festival has evolved over the years was subsequently done by the Darrington RD, and will probably result in less of a presence in following years. The Festival becomes less and less about native plants and has prompted us to decide to place our scarce resources in other areas.

The Botany Program administered the Ski Trek with a Ranger Program at Steven's Pass Ski Area for 10 weeks. Kids learned about plants and animals that live around Steven's Pass, and how they adapt to the winter environment.

In FY2000 we produced several thousand copies of our annual Celebrating Wildflowers newsletter, which features a calendar of plant walks led by dedicated volunteers on the Snoqualmie Ranger District.

In FY2000 we also continued our partnership with Washington Native Plant Society (WNPS) by teaching classes for their Native Plant Stewardship Program. This is like the Master Gardeners program only for native plants – the volunteers we train give back a minimum of 100 hours of time to the community. The program started in King County and has now expanded to Snohomish County.

Watershed Restoration

The Pilchuck Meadow project came to completion this year. Phase I was funded by the Corps of Engineers in fiscal year 1999 and consisted of placing large boulders to eliminate vehicle access to the old ski area. Phase II was Forest Service funded, and allowed us to restore normal surface water flow on the hillside, improve the vehicle blockages, seed and mulch the extensive bare soils, and remove old concrete and other debris from the site. The over-sized parking lot was reduced by 1/3 and a new bulletin board was installed. Contract administration was a combined effort by Engineering and Botany. The Closure Order was completed (by the North Zone Botanist) and signed by the Forest Supervisor in July 2000. The over-riding impetus for this project was the inevitable adverse impacts that off-road vehicles would have on a population of Sensitive plants growing in the area (*Carex pauciflora*), but it will also be very beneficial for water quality, fish habitat, law enforcement, and visual concerns.

The Iron Goat Trail Native Landscaping project entered its second year in FY2000. With the help of a slew of energetic volunteers, we are revegetating the central portion of the new parking lot at Wellington, using native species transplanted from the powerline corridor. We are thrilled to report an 85% or better survival rate for our FY99 transplants. Work parties are currently being organized for 2001, and we're seeking warm bodies.

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Project Support

All 3 botanists conducted field work and served as full IDT members on the numerous projects, including:

Forest-wide LSR Assessment, Baker River Watershed Analysis, Forgotten Thin Timber Sale, 14 small hydro proposals, the Baker River Relicensing, Weyco Land Exchange, Crystal Mountain Master Plan, Stevens Pass Master Plan, Summit at Snoqualmie Ski Area Master Plan, Skyforks Timber Sale, Middlefork Snoqualmie ATM, Universal Fiber Optics, Cliffstone Mine Operating Plan Expansion, Beckler II Roads, South Fork Snoqualmie Road Decommissioning, Enumclaw KV Road Decommissioning, Tinkham Campground Toilet Replacement, Plum Creek Tailholds, Hope Mine Cabin Site, and the Greenwater River Watershed Analysis.

We also completed numerous Biological Evaluations for projects such as trail reconstruction, Special Use Authorizations, watershed restoration, and developed recreation.