

DENALI NATIONAL PARK AND PRESERVE

CENTRAL ALASKA NETWORK

Vegetation Monitoring Program

Summary Trip Report: Primrose Ridge Mini-grid

17 July – 26 July, 2006



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Contributors: James Walton and Abbie Gongloff

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PURPOSE:

The purpose of this work was to install permanent plot stakes and to collect data for the CAKN Long Term Ecological Monitoring Program. There was half a day of travel and 9.5 days of field work from the dates of July 17, 2006 to July 25, 2006.

PERSONNEL:

James Walton - crew leader, nonvasc species composition, soil data, transect cover.

Abbie Gongloff - grid point data, meta-plot data, quadrat and vascular species composition, quadrat variable estimates, plot variable estimates, transect cover.

Larissa Lasselle - plot photos, trip report record, transect cover, quadrat variable estimates, weather record.

ACCESS TO MINI-GRID AND CAMPING POSSIBILITIES:

The rangers, Wendy, Nat and Rob arrived at the office by 9 am and they packed up their bags. We all left the office by 9:30 and headed to the Primrose social trail. We left some of the laptop batteries, fuel, and half of our food at the office to be brought up by Rob on Friday. Rob and 2 rangers helped us carry heavy gear up to our mini-grid. We arrived at our campsite at around 1 or 1:30. We set up camp and then headed to point 3.

We camped about 100 meters east of point 12 . We took cover from the wind behind a small escarpment just north of the ridge. The ground was considerably flat.

There is a large kettle pond on the ridgeline southwest of camp between points 12 and 8 to the south of a rock escarpment. We did pump water from this deep pond, but there was no fresh water flowing in to it. By the end of the week with very little rain the water level in the pond dropped a little and the water began to grow murkier. We preferred to pump from running creeks: From point 24 heading south to point 19 there is a running creek that begins to run dry at around 170 meters from point 19. If you are going to pump water you may want to pump at point 24. There is a running creek to the east of points 20 and 25, but the drainage is dry at up south at point 25. We brought empty water bottles with us to point 16 with hope that the dry drainage to the east would have running water nearby. We had to walk about 400 meters down the drainage to find a small trickle of water. En route to point 21 we passed 2 snow packs to the east. One of the snow packs is near point 17. Point 21 has a running creek on the west side. From point 21 on the way to point 22 we traversed towards the south up the steep west side of the drainage. Then we climbed down to the base of the other drainage. Point 22 is to the east of a drainage with running water.

HIKING:

The hiking is a lot of steep up and down climbing in alpine tundra. There was very little bushwhacking. We did encounter some steep scree slopes that could be dangerous to hike on.

WEATHER AND ENVIRONMENTAL CONDITIONS:

We predominately had patchy clouds and windy, cool weather. It only sprinkled twice during our sampling and didn't really rain until the final day.

GENERAL NOTES ON PLOT-WORK AND PLOT OBSERVATIONS:

Table 1. Collection series for the Primrose Ridge mini-grid.

Collector	Identifier	Series
Walton	Nonvascular plants	Non-sequential
Gongloff	Vascular plants	AG06-156 to AG06-227
Lasselle	Digital Photographs	134-3405 to 139-3977

Table 2. Points Sampled and Animal Observations:

Points	Animal observations
3	We saw an American Golden Plover at point 3.
25, 20	
5, 10, 15	Abbie found very old wolverine scat at point 15.
4, 9, 8	A porcupine passed through at point 4.
24, 19, 14	Just as we were leaving camp a female Dall sheep and a fox visited us. The sheep was grazing by our tents and the fox headed straight to our cook area. We headed off to point 24 and the fox followed us for about 500 meters. Then she ran in front of us and turned to face us and acted like she wanted to play. When we didn't play she ran off. En route to point 19 we could hear marmots and ground squirrels whistling. At 14 two ground squirrels nearby came in and out of a rock pile and squawked at us the entire time.
23, 18, 13	On the way down to point 23 we encountered a female Dall sheep. At 23 I spotted a Golden Eagle landing in the distance. Upon arriving to point 13 we encountered two adult caribou and one young approximately 100-150 meters away. Right before we left plot the caribou ran by again, we think they were scared of the male Dall sheep that walked by shortly after the caribou passed.
1, 2, 7, 12	At point 1 we heard a marmot whistling for almost one hour straight. I spotted a Golden Eagle to the southeast swooping and spiraling. There were two ground squirrels visible from plot. At point 2 we saw another Golden Eagle flying to in the east. There was a Northern Harrier flying nearby. We also spotted an adult caribou to the southeast of our plot. At the end of our work at point 12 a male Dall sheep wandered over to check out what we were up to.
21, 22, 17	At point 21 there were marmots whistling, we saw a porcupine and we passed a small herd of Dall sheep. At point 22 we saw a marmot and heard it whistling the whole time we were on plot.
16, 11, 6	At point 16 on the western bank of the adjacent drainage there was a Dall sheep watching us. He also spent his morning peeing in shrubs and then rolling in them.
none	On the path at the beginning of the Primrose social trail there were two dead White Crown Sparrows.

Note that the order in which the plots are written in the column is the order in which the plots were completed.

ACTIVITIES:

Monday, July 17

We all left the office by 9:30 and headed to the Wilderness Access Center to get bear spray. Then we drove out to the Primrose social trail. Rob and 2 rangers helped us carry heavy gear up to our mini-grid. We arrived at our campsite at around 1 or 1:30. We set up camp and then headed to point 3.

Point 3: The plot marker had a thick cover of gramminoids growing over it and relocating the marker took about 20 minute. The photos were not useful because the magnetic north was not recalculated for this trip and the pictures did not match up with the transects that we layed out. The vascular plant community is abundant with gramminoids and the overall diversity is moderate to high.



Photo 1. Looking southeast at plot 3.

Weather: The sky was blue with a few patches of clouds. It was very windy and cold. Our noses dripped like faucets.

Tuesday, July 18

Point 25: We hiked northeast down to point 25, our furthest plot at ~1000 m from our camp. It is on a steep slope that drops down to a fast running creek. The non-vascular and vascular plant diversity is extremely high. The plot took over 3 hours to complete.



Photo 2. Looking southeast at plot 20.

Point 20: We quickly relocated the plot center monument. The northeast edge of the plot is in a dry drainage. The vascular and non-vascular plants are diverse and the work took over 3 hours to complete.

Weather: The weather today was much like yesterday, very cold and windy with patchy clouds, no rain.

Wednesday, July 19

Point 5: This point is about 900 meters from camp. We hiked southwest up and over the ridge to the south of our camp towards the road. We could hear the cars passing by when we were on plot, but we were still greater than 1 km from the road. The vascular and non-vascular plant community is diverse. There were mosses on site that are indicative of calcium rich soils.

Point 10: Heading north we trudged back uphill about 500 meters to point 10. There were no problems locating the plot center monument. The mosquitoes started to come out but they we did not need bug jackets.

Point 15: From point 10 we headed north uphill to point 15. We thought that this plot would be less diverse but the non-vascular species list count was 76.

Weather: The morning started off cloudy and we got a light sprinkling at our first plot. The water that hit us evaporated faster than our clothes could absorb it. By the second plot the weather was perfect and less windy than it had been.

Thursday, July 20

Points 4, 9 and 8: I was sick today and was only able to work for a couple hours at point 9 and 8. Abbie told me that a hiker and a porcupine passed through at point 4.



Photo 3. Looking southwest at point 8.

Weather: The weather was sunny and warm with less wind than usual.

Friday, July 21

Rob brought up our laptop batteries, fuel and bear barrels that we left at the office. He took out a tall, garbage filled bear barrel.

Point 24: From camp we headed northwest down a steep hill. The plot's east side is located just at the edge of a creek. The southeastern side of the plot lies in dense *Salix* sp. and *Alnus viridis* shrubs. The plot has 6 species of *Salix* sp., and there is *Alnus viridis*. James found the *Rhytidiadelphus triquetrus*, a moss species uncommon in high elevation alpine tundra.



Photo 4. Looking to the northeast from the southwest perimeter of point 24.

Point 19: From point 24 we followed the running creek uphill for 500 meters at a 300 meter elevation gain to point 19. Point 19 is rocky with the usual alpine tundra vegetation.

Point 14: From point 14 we headed uphill 500 meters. The plot was steep and very rocky.

Weather: The sky was blue with patches of clouds and a cold wind blew all day.

Saturday, July 22

Point 23: We headed northwest out of camp down hill to point 23. We followed the scree slope side of a ridge for 2/3 of the hike. The rocks were loose and not that safe. I fell head first and cut my hand. The plot has moderate plant diversity.

Point 18: We headed directly south 500 meters uphill to point 18. This time we skipped the scree slope. The plot is on an open ridge. The wind was very strong at this plot. The plot is

rocky and the vascular plant and lichen diversity and abundance is very low. We took less than an hour working at the plot.

Point 13: We hiked 500 meters uphill to point 13. About 10 meters from plot and on plot James found an abundance of the extremely rare moss *Marsupella revoluta*. This moss was thought to only be found in the Kenai Peninsula. The vascular plants were slightly more diverse than at point 18 and the non-vascular plants were very diverse with about 50 species documented. We were a little more blocked by the wind at this plot because there was a huge rock outcrop to the south of us. We watched 3 hikers to the southwest pass by on a ridge about 1500 meters away.



Photo 5. Looking northeast at point 18.

Weather: The weather was perfect all day. The sky was blue with patches of clouds. There was rain in the far distance. Point 18 is on an open ridge and the wind was very strong.

Sunday, July 23

Larissa Yocum came up to the mini-grid the day before and she stayed all of the day with us. She also packed out two of our bear barrels filled with garbage and empty fuel containers.



Photo 5. Point 1, looking north at quadrat B.

Point 1: From camp we headed south of camp downhill towards the Park Road. At the plot we had a glorious view of the road. The plot is located at the top of a drainage. The vascular and non-vascular diversity is moderate.

Point 2: We headed west 500 m uphill to point 2. At this plot we could see the road and hear the vehicles traveling on the road. The plot lies in a thick *Salix pulchra* stand.

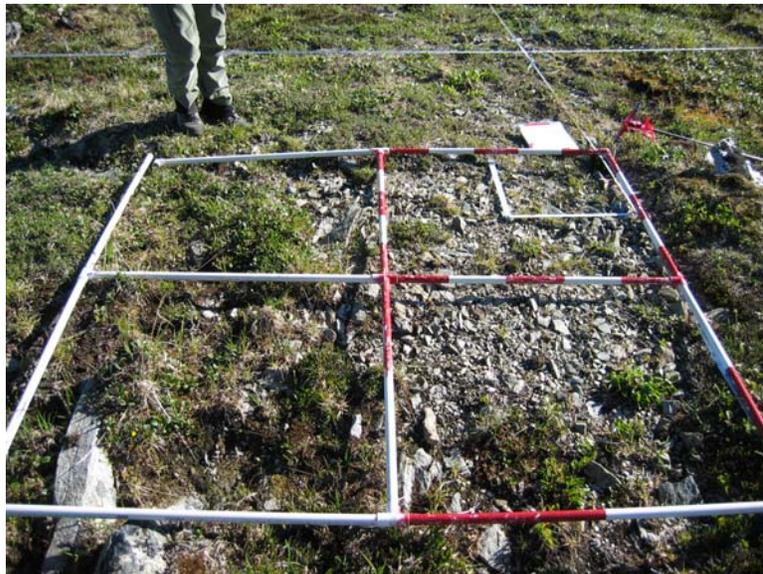


Photo 7. Looking to the south at quadrat 4d of point 7.

Point 7: We hiked 500 meters north and back uphill to point 7. The vascular and non-vascular diversity was moderate.

Point 12: This plot is less than 300 meters from camp. It is located on frost boils. The work was fast because the vascular and non-vascular plant diversity is low. This is the perfect plot to do as the fourth plot because of low diversity and its proximity to camp.

Weather: The sky was cloudless almost all day. It was warm and the breeze did not pick up until the third plot.

Monday, July 24

Point 21: From camp we headed less than one km northeast down a steep hill to point 21. We passed 2 snow patches to the east on the trek down. One of the snow patches is near point 17. The plot is on the east side of a running creek.

Point 22: We traversed towards the south up the steep west side of the drainage. Then we climbed down to the base of the other drainage. The plot is to the east of the other drainage with running water. The plot is flat to a very moderate slope and the forb and graminoid layer is very thick. To the north of the plot there is a thick *Salix* sp. shrub patch.

Point 17: We hiked up the eastern edge of the drainage to the ridge that leads to the first drainage we hiked down in the morning. Then it was another straight uphill shot to the east side of the drainage. This plot is on a steep slope and the ground is exposed and rocky. There was very little herbaceous cover but the diversity was moderate. However the non-vascular plants were extremely diverse with a species list of 80 species.

Weather: The sky was cloudy all day and the wind was very strong and cold

Tuesday, July 25

Point 16: From camp we headed east downhill towards one of the drainages we passed the day before. We could only use the southeastern part of the plot because there is a steep drop off to the northwest with little to no vegetation growing. The lichen diversity was high but the work went faster than at point 17.

Point 11: We trudged back up the extremely steep drainage to point 11. The plot is 90% rocks. Our camp is visible from this plot.



Photo 8. Point 16 looking southwest at a steep drop off.

Point 6: We crossed over the ridge then walked down the south side of the mini-grid to point 6. The road was visible from here. There is high abundance of gramminoids. The vascular plant diversity is moderate.

Weather: The weather was the same as the rest of the week with light rain at point 6.

Wednesday, July 26

We packed up all of our gear and were ready to leave camp by 8 at which time we headed down hill. It took about an hour for us to hike down to the Park Road. Rob picked us up and drove us back to the Panabode.

Weather: The sky was cloudy, it was cold and it started to rain by 9 am.

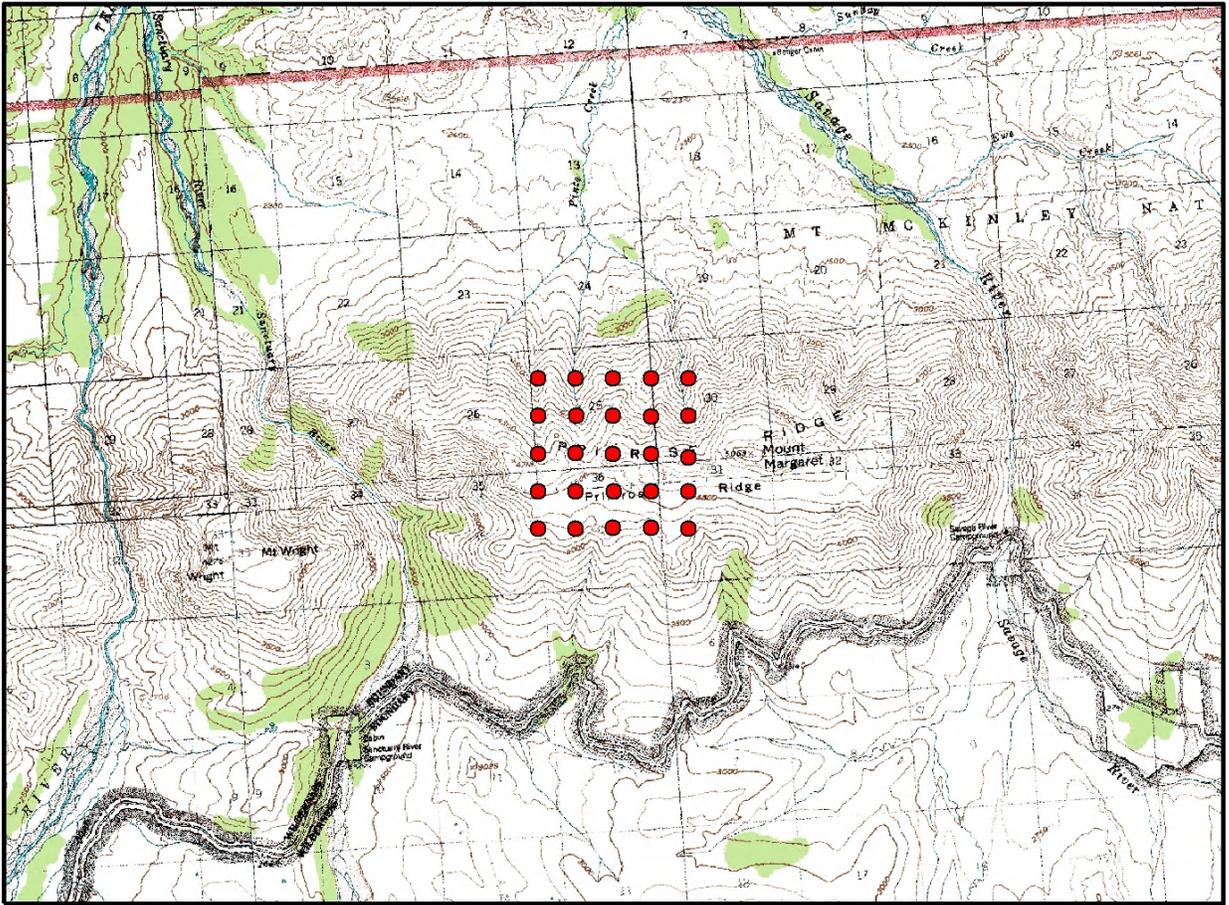
CONCLUSION AND FUTURE CONSIDERATIONS:

Rob Lieberman and Larissa Yocum both hiked up to our site and helped carry out gear and supplies. Only Rob was scheduled to help carry out gear and if Larissa had not helped as well, James, Abbie and I would not have been able to carry out all of the gear.

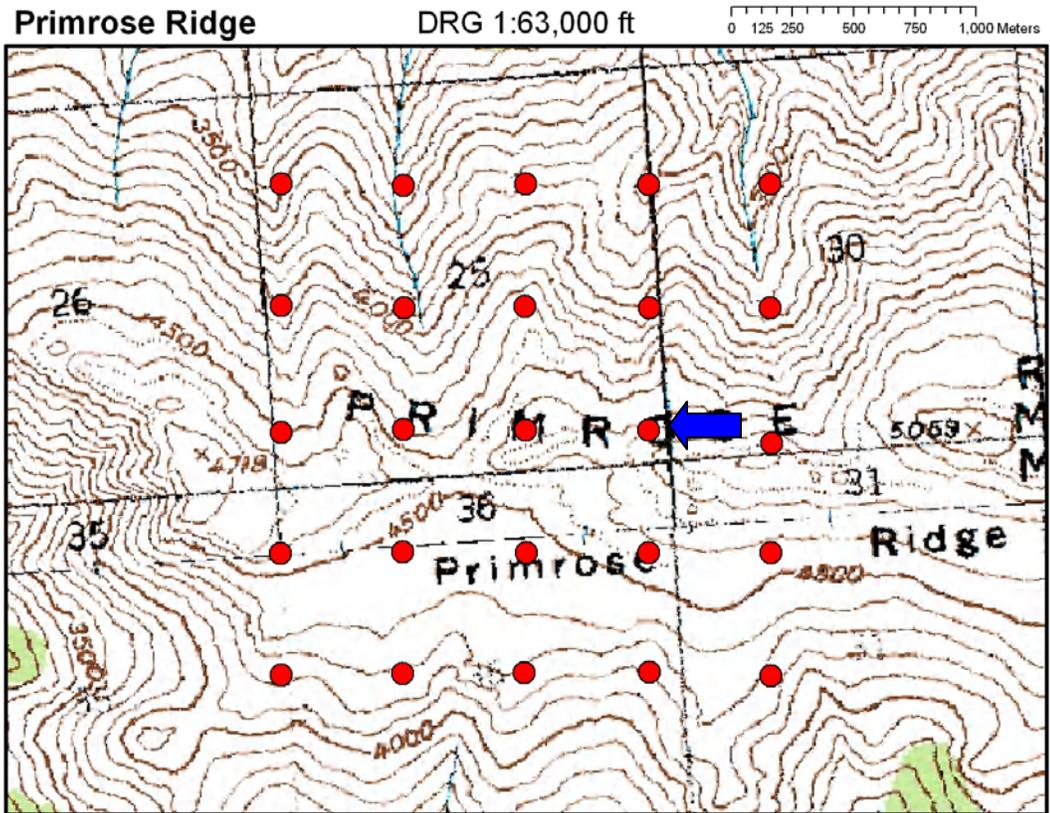
Primrose Ridge

DRG 1:63,000 ft

0 500 1,000 2,000 3,000 4,000 Meters



Map 1. Overview topo map of Primrose mini-grid.



Map 2. Primrose mini-grid. The blue arrow points to the area that we camped.