

DENALI NATIONAL PARK & PRESERVE
CENTRAL ALASKA NETWORK
Vegetation Monitoring Program
Summary Trip Report: Kankone Peak Mini-grid
3 July – 12 July, 2006



Figure 1. Ridgelines, open tundra, and rocky chutes are characteristic of the Kankone Peak mini-grid.

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PURPOSE:

The purpose of this trip was to install permanent point markers and collect first-year vegetation and soils data. 25 points were visited, 21 were installed and sampled in the span of 8 working plus 2 travel days. 4 points were determined to be in actively moving, rock-strewn gullies and therefore unfit for sampling.

PERSONNEL:

Carl Roland- vascular collections and crew lead
Peter Nelson- lichen collections and plot photographs
Sarah Stehn- bryophyte collections and soils data

ACCESS TO MINI-GRID AND CAMPING POSSIBILITIES:

Kankone Peak mini-grid is accessed by helicopter. The center point of the grid is 19.3 kilometers northeast of the Kantishna Landing strip, about a 10 minute helicopter ride. Travel logistics for this grid were combined with another LTEM vegetation crew aiming to complete the Bearpaw River mini-grid. Due to poor weather on the day we were supposed to leave, logistics did not go on as planned. Neither helicopter nor airplane could fly due to a low ceiling. By 11:00am, instead of waiting for better flying weather, myself and the other LTEM crew with most of the gear drove the park road to Kantishna. Peter and Carl stayed the night at headquarters and flew straight to the Kankone Peak grid via helicopter the next day. The helicopter then ferried the rest of us from Kantishna to our respective grids and completed one more trip to deliver water to each grid. The whole crew was at the Kankone Peak mini-grid with all of our sampling gear by 1:30pm on Tuesday, July 4th.



Figure 2. View from camp looking south to southeast.

We camped on a small shoulder just south of a main ridge running northeast-southwest (longitude -150.635824, latitude 63.610098). The campsite has an excellent helicopter landing site, shelter from wind on three sides and numerous flat spots. It is nearest Point 18 and provides excellent views and nighttime strolls along the ridges (if you are not exhausted). Satellite phone reception was best on the pass just above camp.

We had six five-gallon jugs delivered by the helicopter with our gear. We used 25 gallons in 9 days. There is water in the grid located at a few small creeks in the vicinity of Points 6 and 7, 11 and 16, 23 and 25, the closest to camp being 750-1000 meters away downslope. Water for the day could be pumped at these sites. Due to the steepness of the terrain, pumping at any of these sites and hauling it up to camp is not necessarily feasible though it can be done.



Figure 3. Point 1 is on an exposed ridge. We had to move off the plot as a thunder and lightning storm came.

HIKING:

Hiking conditions at the Kankone Peak mini-grid were strenuous due to topography. We ascended and descended upwards of 1000 ft in elevation almost daily. The footing was decent with some areas of loose rock but plenty of open tundra too. Side-hilling was often necessary but there was minimal bush-whacking. Sturdy hiking boots are recommended.

WEATHER AND ENVIRONMENTAL CONDITIONS:

Thunderstorms came daily, sometimes 2 or 3 times, so we spent a lot of time taking on and off rain gear. Lightning strikes definitely happened nearby so pay attention to where you are when the storm is closest. The other LTEM vegetation crew sampling at Bearpaw River (20km north) had a view of our site and said we were in a nasty clouds even when the weather where they were was relatively mild. Storms regularly built up by 2pm but on the

day we were supposed to fly out had started by 11am. Throughout all the storms we did get some breaks in the clouds and have sun streaks dry us out.

Table 1. Daily precipitation and temperature highs and lows

| Date | Precipitation | High* | Low |
|---------------------------------|---------------|-------|------|
| Wednesday, July 5 th | 8.1mm | 88°F | 50°F |
| Thursday, July 6 th | 13.9mm | 68°F | 45°F |
| Friday, July 7 th | 23.5mm | 73°F | 47°F |
| Saturday, July 8 th | 5.7mm | 63°F | 45°F |
| Sunday, July 9 th | 0.0mm | 93°F | 43°F |
| Monday, July 10 th | 1.1mm | 89°F | 44°F |
| Tuesday, July 11 th | 3.7mm | 94°F | 44°F |
| Total Precip/Average Temp | 56.0mm | 81°F | 45°F |

*The thermometer was placed in a south-facing rock outcrop and thus read much higher than actual air temperatures.

Animal Observations: We saw many different animals at this mini-grid but not very many sightings of any of them. We observed a large grizzly one evening in the drainage below camp near Point 6 winding in and out of the brush. We saw old grizzly scat on the pass just above camp indicating that they do occasionally travel up high. As Carl got flown out in the helicopter on the last day he observed a large grizzly in the northeast corner of the grid.

We also observed 2 bull caribou and a short eared owl in the northeastern part of the grid and a cow or adolescent caribou near Point 9. Near camp there were numerous ground squirrels and a short-tailed weasel seen in the large rock pile to the south of camp. Watch out for items left outside your tent getting chewed on (including plastic bags full of soil). The rascals became very bold by the end of the week and chewed the foam and paper of a plant press under the vestibule of Carl's tent.

Also observed were ptarmigan, golden eagle, pika, American pipit, northern harrier, and upland sandpiper. We caught a brief glimpse of a wolverine while sitting at Point 17 and looking southeast. Peter spotted it sitting on a rock outcrop before it skittered away.

Mosquitoes were moderate however the weather was not necessarily conducive to them due to much rain and some winds.

PHENOLOGY OBSERVATIONS:

Phenology for Kankone Peak in early July was just about right. Wildflowers were blooming and there were few problems finding grasses with flowering heads.

GENERAL NOTES ON PLOT-WORK AND PLOT OBSERVATIONS:

The Kankone Peak mini-grid is a fantastic alpine site. The numerous ridgelines and valleys traversed, the views of Denali and other peaks, and the high alpine vegetation make this site a great place to spend 10 days. The strenuous hiking and many thunderstorms make it a

challenging place to work. On a clear day we saw the Tanana River to the north, Minchumina Lake to the northwest and even as far as the Ray Mountains.

This is a high diversity grid. Vascular species regularly reached 60-70 per point and non-vasculars were a few times above 50. The plots ranged from wet alpine seeps and slumps to rocky ridge tops and herbaceous meadows. There were no problems getting GPS satellites.



Figure 4. Claytonia ascholtzia, uncommon, was found in flower at Point 5.

Table 2. Collection series for the Kankone Peak mini-grid.

| Collector | Identifier | Series |
|-----------------|-------------|--|
| Roland | Vascular | CR-06-015 to CR-06-091 |
| Nelson | Lichen | PRN-06-41 to PRN-06-159 |
| Stehn | Bryophyte | SES-06-41 to SES-06-196 |
| Nelson | Photographs | IMG_0492 to IMG_0658, IMG_3201 to IMG_3432, IMG_4345 to IMG_4349 |
| Stehn | Soil | 28 samples |
| Roland & Nelson | Tree Cores | none collected, no trees |



Figure 5. Views of Denali from the Kankone Peak mini-grid.



Figure 6. Looking south from Point 10 to Point 5 shows what some of the lower elevation points are like.



Figure 7. Looking down on Point 20 from near Point 19 helps illustrate the strenuous hiking in this mini-grid.

ACTIVITIES:

Table 3. Summary of daily activities.

| Date | Activity/Points Completed | Comments |
|----------------------------------|--|--|
| Monday, July 3 rd | Transport personnel and gear to Kantishna via vehicle | 10am-4:30pm, vehicle used due to poor flying weather |
| Tuesday, July 4 th | Transport personnel and gear to Kankone Peak via helicopter | 8am-12pm |
| | Point 12 | 1:30pm-5:30pm |
| | Point 13 | 5:30pm-8pm |
| Wednesday, July 5 th | Point 13 (remaining 2 quadrats) | 8am-9:30am |
| | Point 9 | 9:45am-2pm, hailstorm midway through |
| | Point 5 | 2:15pm-5:30pm, sunny |
| | Point 10 | 6pm-8:45pm, sunny, some drizzle |
| Thursday, July 6 th | Point 6 | 9am-12:30pm |
| | Point 1 | 2pm-4:45pm |
| | Point 2 | 5pm-8:45pm |
| Friday, July 7 th | Point 8 | 8:30am-12:30pm, drizzle |
| | Point 3 | 1:30pm-4:40pm |
| | Point 4 | 5pm-8:30pm, major squall came |
| Saturday, July 8 th | Point 21 | 8:30am-12:30pm, drizzle |
| | Point 22 | 2pm-4:30pm, rock plot |
| | Point 20 | 5pm-8:30pm, drizzle |
| Sunday, July 9 th | Point 7 | 8:30am-12pm, sunny |
| | Point 11 | 1pm-4:30pm, sunny |
| | Point 16 | 5pm-7:30pm, sunny |
| Monday, July 10 th | Point 20 | 9:30am-1pm, sunny |
| | Point 25 | 2pm-5pm, sunny |
| | Point 24 | 5:30pm-8:30pm, thundershower |
| Tuesday, July 11 th | Point 17 | 8:45am-12pm |
| | Reconnaissance of Points 14, 15, 18, 19 | 1pm-5pm, all points were in active rock strew gullies, unsafe and impractical for sampling |
| Wednesday, July 12 th | Transport personnel and gear to headquarters via helicopter and airplane | 10am-7pm, sat through a few thunder, lightning, and rain storms |

CONCLUSION AND FUTURE CONSIDERATIONS:

The 21 accessible points can be sampled in 7 days (albeit long days). It took us 8 due to the weather delay in getting out to the site and the investigation of the 4 points that will not be sampled in future years.

There were no trees in the grid so it is not necessary to bring tree sampling equipment. There were a few plots where we had to wind the tape through the brush but it was rarely above 0.5 m so browsing measurements were often not necessary.

There is an auxiliary photo point that could be revisited if time allows but it would require a little extra hiking: Kankone26a (longitude -150.642205, latitude 63.610724) shows the Caribou Creek drainage which encompasses the northern most row of points (see Figure 8).

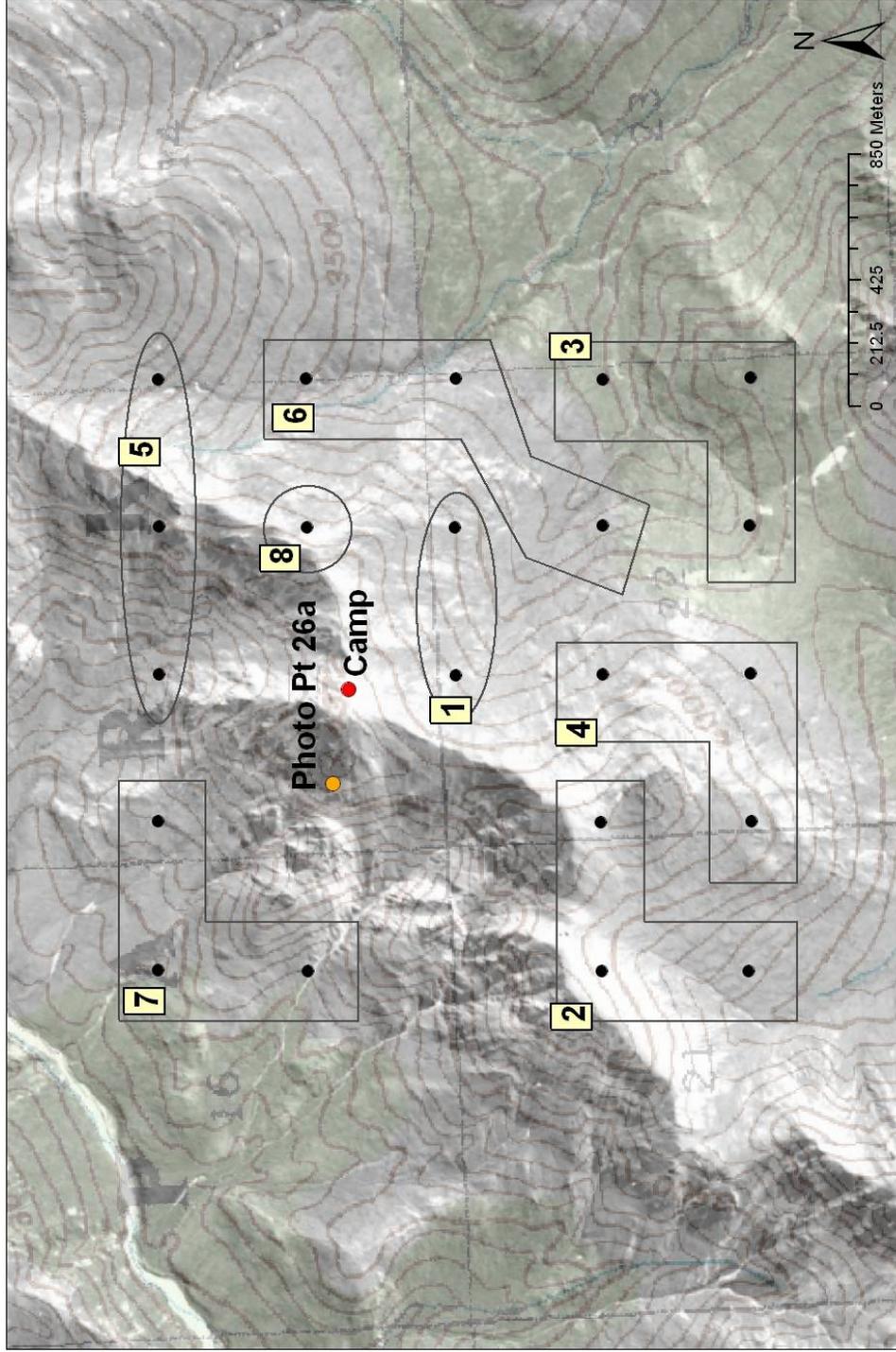


Figure 8. View from auxiliary photo point 26a looking west at Caribou Creek.



Figure 9. Looking southeast to southwest from Point 12. Points 1, 2, 6, 7, 8, 9, and 10 are visible.

Kankone Peak Mini-Grid



Points are grouped by sampling day number showing in which order we sampled them.

