

DENALI NATIONAL PARK AND PRESERVE

CENTRAL ALASKA NETWORK

Vegetation Monitoring Program

Summary Trip Report: Wonder Lake Mini-grid

19 June – 24 June 24, 2006

23 July – 25 July, 2006



Figure 1. Looking southeast over mini-grid on a clear day in July. Stream in the lower right is near Point 24.

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Contributors: James Walton, Abbie Gongloff, Carl Roland, Peter Nelson

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PURPOSE:

The purpose of these trips were to install permanent point markers and collect first-year vegetation and soils data as well as train 3 new crews for the season to come. 18 points were visited, installed, and sampled during 2 sampling trips, the first being 4 days in duration (plus 2 for travel) and the second visit being 2 days (plus 1 for travel). The remaining 7 points were found to be in the river bar or channel and unfit for sampling.



Figure 2. Point 9 looking southeast at the plot.

PERSONNEL:

Green Team:

Carl Roland: vascular collections and crew lead
Bryan Dykstra: vascular collections assistance at first visit
Doug Wilder: tablet PC troubleshooting at first visit
Peter Nelson: lichen collections and plot photographs
Sarah Stehn: bryophyte collections and soils data

Red Team (at first visit to mini-grid):

James Walton: crew leader, species composition data (non-vascular plants), soil data, transect cover, plot tree and sapling data
Abbie Gongloff: grid point data, meta-plot data, quadrat and species composition data (vascular plants), quadrat variable estimates, plot variable estimates, transect cover, plot tree and sapling data
Larissa Lasselle: plot photos, trip report record, plot tree and sapling data, transect cover, quadrat variable estimates, weather record
Jay Scelza: species composition data (non-vascular plants), plot tree and sapling data, transect cover, quadrat variable estimates
Luke Brunner: species composition data (non-vascular plants), soil data, plot tree and sapling data, transect cover, quadrat variable estimates

ACCESS TO MINI-GRID AND CAMPING POSSIBILITIES:

The Wonder Lake mini-grid may be accessed from two directions. If planning to camp on the river bar, it is best to initially approach the grid on the McKinley Bar Trail (see map) which heads off the east side of the road to the Wonder Lake Campground. If planning to do day trips to the grid from the Dolle-Molleville cabins some points are best accessed from the Wonder Lake Campground (see discussion under Future Considerations section).



Figure 3. Point 20 looking south at quadrat 4a.

Camping at the Wonder Lake mini-grid is best on the McKinley river bar as many sites in the forest can be quite wet. We used the McKinley Bar Trail to reach the bar but veered west into the forest just before reaching the bar. One of the main channels of the McKinley River is currently (summer 2006) running near the northern bank which made travels along that bank hazardous and travels on the bar near impossible without crossing many channels. We stayed in the forest, generally keeping the river bar in sight and worked our way west about 2 kilometers to Point 8. From there we headed out onto the bar and found a small clear stream nearby so set up camp. Camping on the river bar proved to be slightly precarious this year because after a few days of rain the river swelled considerably, refilling old channels and cutting us off from our cook site, our bear cache and even each others tents, eventually forcing us to relocate camp entirely. Each day we returned from work on the grid a new channel would have begun flowing, sometimes proving to be difficult to cross.



Figure 4. Point 21 looking northwest at the plot.

Fresh water was available in a few places in the Wonder Lake mini-grid. The McKinley River is very silty and thus not recommended for pumping. Cooking with it is all right, especially given some time for the silt to settle out, and washing with it is excellent. There are a few small creeks coming out of the grid that are clear and excellent for pumping drinking water. Some of this pools up at the forest edge and may or may not become mixed with the silty water but if necessary the walk into the forest where the water is clearer is not far. The creeks can be seen on the IKONOS imagery. We ended up bringing the pump with us during the day and aiming to return to camp with full water bottles because our fresh water source near camp was somewhat contaminated by the silty water due to the expanding river.

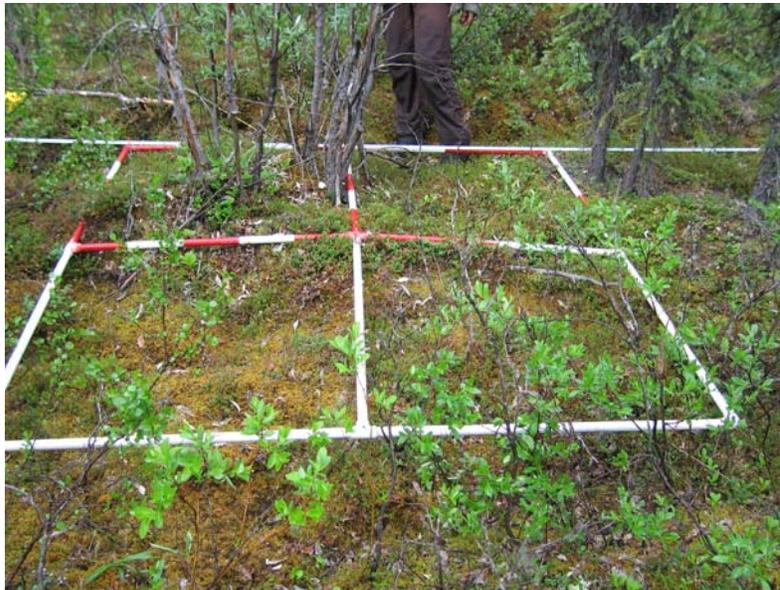


Figure 5. Point 12 looking south at quadrat 4a.

HIKING:

Hiking conditions at the Wonder Lake mini-grid were moderate. The terrain was flat topographically but extremely undulating in terms of vegetative cover. Most of the forest was relatively open, some areas had many kettle holes, and the ground was generally soft and spongy. The northwest corner of the mini-grid is an anomaly in its open meadow state, travel there is quite easy. All hiking and weather conditions were complicated by the ravenous mosquitoes. Hiking is that much harder while swallowing untold numbers of bugs or breathing through a bug jacket.

PHENOLOGY OBSERVATIONS:

Phenology in the white spruce portion of the grid was ready for sampling in late June. Phenology in the meadow portion of the grid was not ready in late June, but ready by late July. This area is subject to overflow icepack from the river which does not melt until deep into spring.

GENERAL NOTES ON PLOT-WORK AND PLOT OBSERVATIONS:

Most of the Wonder Lake mini-grid lies in white spruce forest, while the northwestern corner lies in a meadow/fen area.

Table 1. Collection series for the Wonder Lake mini-grid.

Team	Name	Collection	Numbers Visit 1	Numbers Visit 2
<i>Green</i>				
	Roland	Vascular	CR-06-001 to CR-06-014	CR-06-143 to CR-06-153
	Nelson	Lichen	PRN-06-001 to PRN-06-040	PRN-06-230 to PRN-06-249
	Stehn	Bryophyte	SES-06-001 to SES-06-040	SES-06-338 to SES-06-379
	Nelson	Photographs	IMG_0347 to IMG_0382	IMG_3782 to IMG_3851
	Stehn	Soil	20 samples	12 samples
	Roland, Nelson	Tree Cores	18 cores collected	20 cores collected
<i>Red</i>				
	Gongloff	Vascular	AG06-23 to AG06-68	n/a
	Walton, Scelza	Lichen	various	n/a
	Walton, Scelza	Bryophyte	various	n/a
	Lasselle	Photographs	IMG_0347 to IMG_0382	n/a
	Walton, Brunner	Soil	12 samples	n/a
	Various collectors	Tree Cores	22 cores collected	n/a

Wildlife observations: During the first visit to the Wonder Lake mini-grid we saw many large grizzly tracks along the McKinley river bar and plenty of bear digging sign. Also spotted were spruce grouse, little fish in a stream, and frogs along a trail. Mosquitoes were about at their worst, making it difficult to bring food to your mouth even out on the river bar where you can usually count on a slight breeze. Plan for the worst you can imagine and maybe you will get less.

During the second visit, we saw plenty of evidence of bear digging in the meadow that takes up the northwest corner of the plot, here we also saw a caribou. Mosquitoes were still quite bad in late July but their presence was perhaps augmented by the humid, warm but overcast conditions they love.

ACTIVITIES:

Table 2. Daily activities and notes of the 1st Visit: Red Team

Date	Activity/Points Completed	Comments
Monday, June 19 th	Transport personnel and gear to McKinley Bar trailhead via park road. Proceed on foot to the McKinley River Bar, choose campsite	9am-1:30pm 2pm-5pm
Tuesday, June 20 th	Points 9 and 10	It rained in the morning but cleared up by the afternoon.
Wednesday, June 21 st	Points 11 and 12	In the morning the weather was partly sunny and no rain. It started to rain mid-afternoon.
Thursday, June 22 nd	Due to rising river, haul out all gear to Friday Creek cabins in Kantishna. Data entry at Friday Creek.	8am-2pm 2pm-5pm
Friday, June 23 rd	Points 16 and 17	The weather was partly sunny and no rain all day.
Saturday, June 24 th	Transport personnel and gear back to headquarters.	8am-1pm

Table 3. Daily activities and notes of the 1st Visit: Green Team

Date	Activity/Points Completed	Comments
Monday, June 19 th	Transport personnel and gear to McKinley Bar trailhead via park road.	9am-1:30pm
	Proceed on foot to the McKinley River Bar, choose campsite.	2pm-5pm
Tuesday, June 20 th	Point 8	8am-1pm, low clouds
	Point 13	2pm-6:30pm, open forest
Wednesday, June 21 st	Point 15	9am-3:30pm, open stunted spruce forest with kettle holes
	Point 14	4pm-7:30pm, stunted forest with kettles
Thursday, June 22 nd	Due to rising river, haul out all gear to Friday Creek cabins in Kantishna.	8am-2pm
	Data entry at Friday Creek.	2pm-5pm
Friday, June 23 rd	Point 19	10am-3:15pm
	Point 18	3:45pm-7:35pm
	Assisted Red Team with Point 17.	7:35pm-9pm
Saturday, June 24 th	Transport personnel and gear back to headquarters.	8am-1pm

Table 4. Daily activities and notes of the 2nd Visit: Green Team

Date	Activity/Points Completed	Comments
Sunday, July 23 rd	Transport personnel and gear to Dolle-Molleville via park road.	8am-1:30pm
	Point 21	1:30pm-4:45pm, near trail
	Point 22	5:30pm-8:30pm
Monday, July 24 th	Point 25	9am-12pm
	Point 20	12:40pm-3:40pm
	Point 24	4pm-6:15pm
	Point 23	6:35pm-9pm, very diverse, collected all data except for two quadrats
Tuesday, July 25 th	Transport personnel and gear back to headquarters via park road	8am-1pm

CONCLUSION AND FUTURE CONSIDERATIONS:

The Wonder Lake mini-grid is an excellent training grid. The proximity to the park road, seasonally early phenology over most the grid and relatively low diversity of species make it a good place to train crews. The mosquitoes generally aren't any worse than they are at Wonder Lake so it is a good place to break crews in as well.

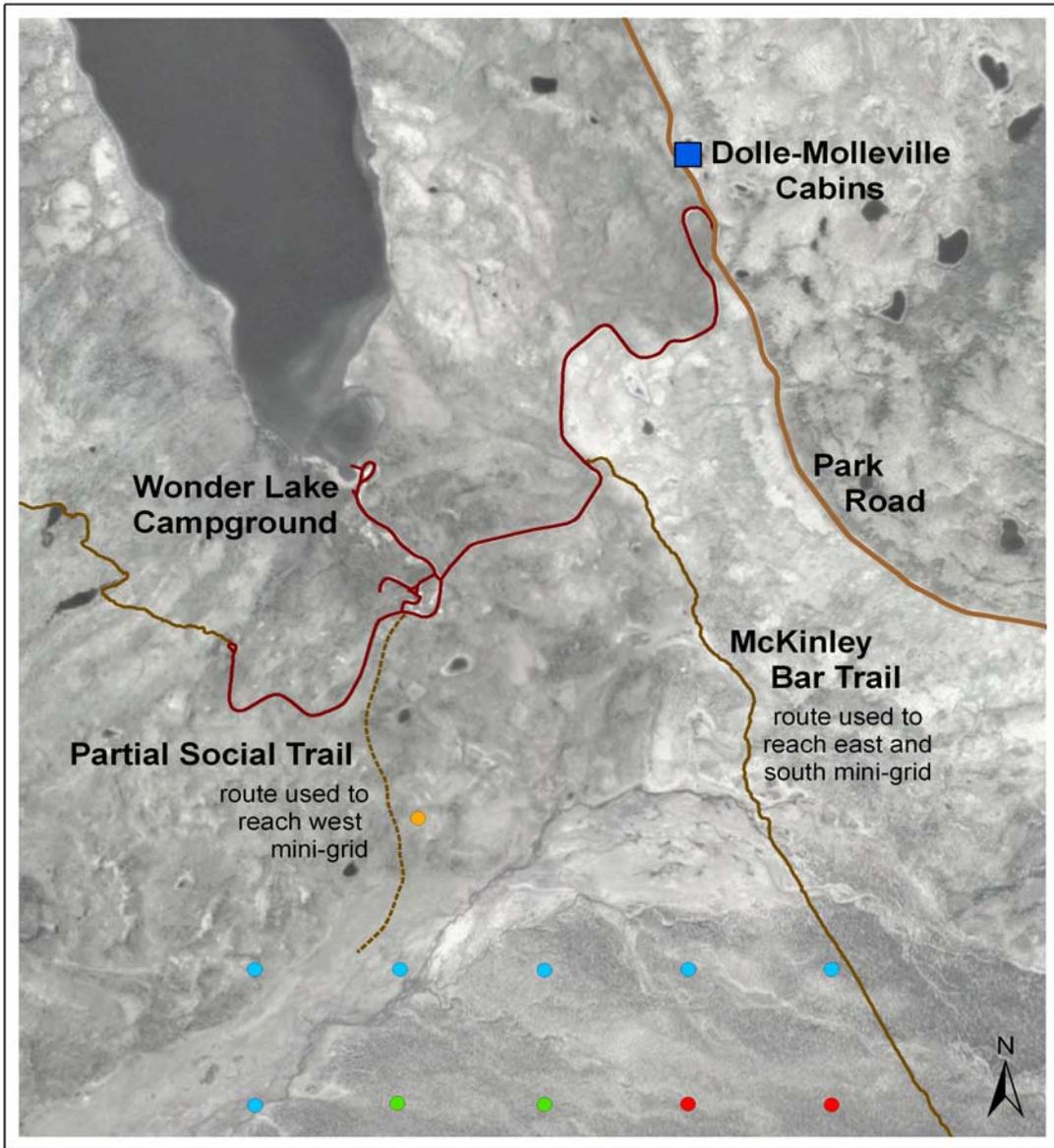
This year we approached the grid from the south because we planned to camp on the river bar. By the time we were working on the most northerly rows, we were closer to the McKinley Bar Trail and the road than we were to our campsite. Because of this it is suggested that this trip have 2 separate campsites. The first being on the river bar, near Point 8. From here the lower 2 rows can be tackled. Then take half a day to pack up camp and hike back to the trailhead to stay the remaining days at the Dolle-Molleville cabins. From the cabins you get slight relief from the bugs and decent access to the northern rows of points. The eastern points can be accessed from the McKinley Bar Trail and the western points from the Wonder Lake Campground.



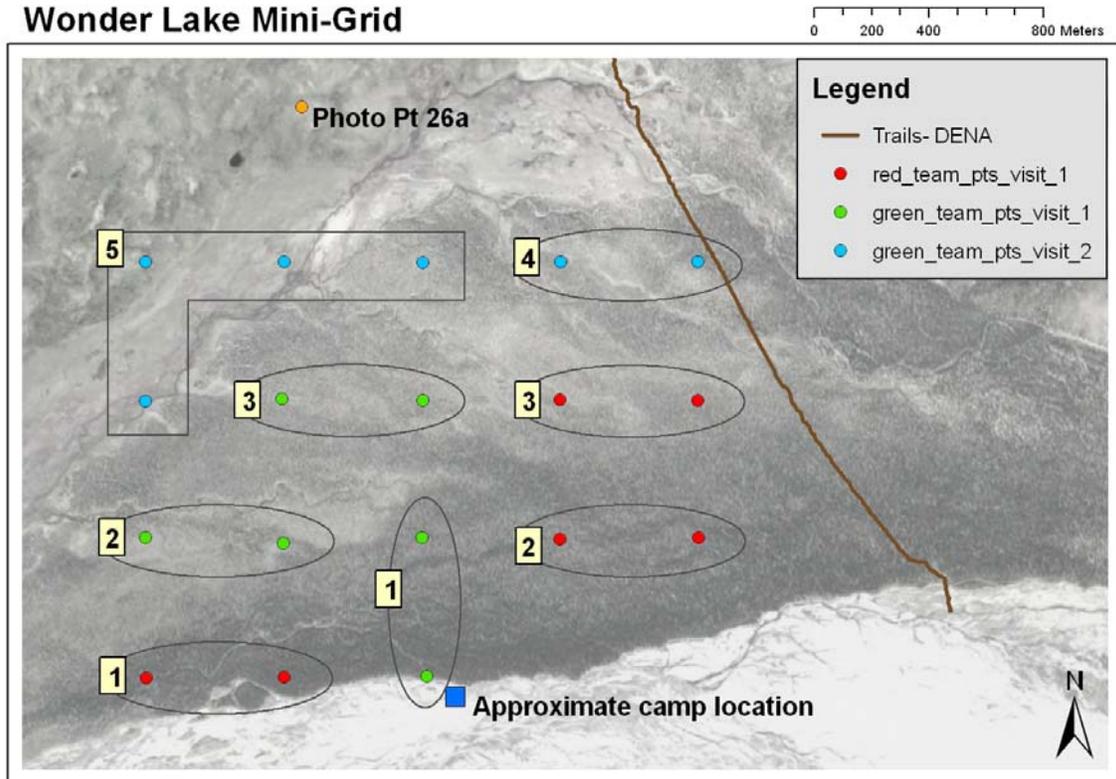
Figure 6. Point 17 looking at the plot center monument

Wonder Lake Mini-Grid Access

0 210 420 840 Meters



Wonder Lake Mini-Grid



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