

DENALI NATIONAL PARK AND PRESERVE

CENTRAL ALASKA NETWORK

Vegetation Monitoring Program

Summary Trip Report: Bearpaw River Mini-grid

3 July – 12 July, 2006



Author: Larissa Lasselle

Contributors: James Walton and Abbie Gongloff

August 16, 2006

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 1.5 days of travel and 8.5 days of field work from the dates July 3, 2006 to July 12, 2006. For various reasons mentioned later in the report we did not sample points 16, 17 and 21.

PERSONNEL:

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.

ACCESS TO MINI-GRID AND CAMPING POSSIBILITIES:

Peter and Sarah from the green team and Abbie and I were scheduled to fly from the Headquarters airstrip in the fixed wing airplane to the Kantishna airstrip, at which point we would transfer to the helicopter and be flown to our respective mini-grids. James and Carl were going to fly from the Headquarters airstrip to their mini-grids. Plans changed because it was very foggy almost all day and we could not take off in neither the helicopter nor the fixed-wing plane. Instead, James, Abbie, and Sarah and I drove from Headquarters 145 km down the Park Road to the Kantishna air strip and camped at Friday Creek for the night. We were able to fly out in the helicopter in the morning. The Kantishna airstrip is approximately 32 km from the Bearpaw River mini-grid.

We established a campsite just north of point 8 (we could see our tents from the site) at the top of a ridge in alpine vegetation. Our cook tent was about 100 meters to the east. There are plenty of flat spots to camp at this grid, but there are many rocks to avoid.

We flew in 5, 5 gallon jugs of water to our mini-grid in case we could not find water to pump from. We pumped water from a creek southeast of the campsite near point 4. We crossed a running creek heading southwest from camp en route to point 1. We also pumped water at a running creek to the northwest of camp between points 24 and 25.

HIKING:

The hiking was a variety of steep uphill climbs and descends through alpine tundra vegetation and bushwhacking through *Alnus viridis* and *Salix* sp. stands. There was some walking over tussocks.

GENERAL NOTES ON PLOT-WORK AND PLOT OBSERVATIONS:

In 9 days we sampled points in this order: 5, 4, 9, 14, 1, 6, 11, 12, 7, 20, 15 (abandoned until the next day because of a black bear), 10, finished 15, 25, 24, 19, 22, 23, 18, 2, 3, 8, 13. We did not visit points 16, 17, and 21. The three major contributing factors for not completing work on all points at the grid include 1) arriving a day late due to the helicopter and plane not being able to take off because of fog, 2) on July 6, 2006 we had at the least a 2 hour delay due to a severe thunderstorm, and 3) on July 8, 2006 we had a delay because of the approach of a black bear and we had to abandon plot until the next day. We left these plots out because they looked like they would require a lot of time because the hikes down looked like steep climbs through thick alder and willow stands.

Table 1. Collection series for the Bearpaw River mini-grid.

Collector	Identifier	Series
Gongloff	Vascular plants	AG06-69 to AG06-155
Lasselle	Digital Photographs	100-0010 to 102-0232, 100-0001 to 105-0534, 100-0001 to 100-0012
Walton	Nonvascular collections	Non-sequential
Walton	Soils	BPR1 to BPR11A, BPR11B to BPR18, BPR18b to BPR25

Table 2. Wildlife observations.

DATE	LOCATION	OBSERVATION
Monday, July 3	Park Road en route to Kantishna	On the drive we spotted a Golden eagle, 2 Short-Eared owls, ground squirrels (of course), caribou and a young moose.
Tuesday, July 4	Campsite and 5	At camp and in the surrounding area there were American Golden Plovers. I Spotted a Short-Eared owl flying northeast of camp.
Friday, July 7	12, 7	At point 12 there was a tree with fairly recently left moose scat dropping from 3 feet up in the tree down to a pile on the ground. At point 7, located about 500 m from camp we spotted a Whimbrel.
Saturday, July 8	20, 15	On the way down to point 20 we passed an American Golden Plover and its chick. Half way through work at point 15 I spotted a black bear to the northeast on the other side of a drainage about 500 m away. The bear crossed up and over the ridge and then headed further south down the Bearpaw River drainage and out of sight.
Monday, July 10	18	From point 18 James spotted a Golden eagle flying east.
Tuesday, July 11	2,8	From camp heading south to point 2 we disturbed American Golden plovers, Whimbrels and Ptarmigans. The birds squawked and flew just overhead the whole way down. The Whimbrels and Ptarmigans had chicks running on the ground. At point 8 I spotted a Golden eagle to the south spiraling up and down.

Monday, July 3

We left the office for the Headquarters air strip at 8:30 am. James, Abbie, Sarah (from team green), and I did not take off because of thick fog. Instead we left the air strip at 11 am and drove to Friday Creek. We reached Friday Creek at 4 pm and waited to hear from Carl via satellite phone whether we would fly out in the helicopter to our respective grids. We did not fly out, so the four of us stayed at Friday Creek for the night.

Weather: The fog was too thick to fly out.

Tuesday, July 4

We left Friday Creek for the Kantishna air strip at 8 am. George (the helicopter pilot) picked up James and me between 9:30 am and 10 am. We arrived at Bearpaw River and unloaded and set up camp. Next Abbie and Sarah arrived, but Sarah left for the team green grid at Kankone Peak.

Point 5: From camp we headed southeast to point 5 (photo 1). We arrived at the point by 3 pm.



Photo 1. Point 5 from plot center to the east perimeter.

Point 4: By the time we reached point 4 the time was 6 pm and it was too late to start the plot.

Weather: The sky was clear so we were able to fly out in the helicopter. The weather was partly cloudy with no rain.

Wednesday, July 5

Point 4: We headed approximately 100 m southeast of our campsite, down a steep hill approximately to point 4. The plot is in a thick *Alnus viridis* and *Salix* sp. stand with abundant graminoids. It was hard to maneuver around the plot because it was so thick. The work took about 3 hours. The bugs were bad.

Point 9: From point 4 we hiked for 40 minutes north and back up the steep hill to point 9. The site is located on an alpine ridge.

Point 14: Point 14 is north of point 9 and just down on the other side of the ridge. We were done with work on plot at 9:30 pm.

Weather: The morning was rainy but halfway through the first plot the sky cleared, the sun shone during work at point 9. Midway through work on point 14 we could see the rain clouds creeping in on us. But by 9:30 PM when we were finished and hiking back to camp the sky was clear again and we had a nice view of Denali.

Thursday, July 6

Point 1: We left camp at 8 am and headed southwest to point 1. It was a long hike down the ridge, then down a drainage and then we crossed a stream surrounded by a thick *Alnus* sp. and *Salix* sp. stand. It took about 1 hour and 20 minutes to reach the plot. The plot is in the same *Alnus* sp. and *Salix* sp. stand that we trudged through. Working around the plot took a lot of time. *Boykinia richardsonii* is abundant on plot. The bugs were moderate.



Photo 2. Point 6 looking south at quadrat A.

Point 6: When we were finishing up work at point 1 thunder began to rumble and the clouds were coming in. We headed back up hill to point 6 when the rain, thunder and lightning began to strike around us all at once. At 300 meters away from plot we stopped hiking up the ridge and reassessed how safe it was to walk to the point with metal equipment. The lightning was striking on the approximately 100-200 meters away on the ridge just above us. We left our packs and all metal gear in one spot and decided to eat lunch while waiting out the storm. Lunch was postponed because the storm got so severe we had to take cover. There is no cover in the alpine so we ran downhill to a small hole near a *Salix* sp. patch. The weather cleared up and we made it to point 6 by 3:30 pm. In all, walking uphill to point 6 and then waiting out the dangerous storm we lost about 2 hours of work.

Weather: In the morning the sky was clear and the weather was warm and sunny. By the end of work at the first plot we could hear thunder rumbling in the distance and the clouds were moving in. Halfway to point 6 the thunder was overhead and lightning was striking about 500 m away on the ridge we were heading to. We had to take cover down low for about 45 minutes while the severe thunder storm passed.

Friday, July 7

Point 11: From our campsite we headed east along the ridge that and then headed north downhill to point 11.

Point 12: From point 11 we headed west 500 meters to point 12. There was some bushwhacking through the hike. The plot is in a thick *Alnus viridis* and *Salix* sp. shrub layer. Walking around plot is challenging. One *Alnus viridis* had some fresh looking moose scat splattered 1 m up in a branch and dripping into a pile on the ground.

Point 13: Point 13 is on the ridge less than 500 m north of camp in a nutrient poor fen. *Sphagnum* sp. was abundant, as well as aquatic *Sphagnum* sp.

Weather: It rained the whole time we worked at point 11. The rain kept up through our work at point 12. The rain eased up at point 7 but the air temperature dropped and Abbie feared she might be developing Hypothermia.

Saturday, July 8

Point 20: From our camp, point 20 is northwest down a slope through the open alpine and then through an *Alnus viridis*, *Salix* sp. and *Picea mariana* stand (photo 3). On the way down we found *Boletus* sp. mushrooms. The bushwhacking to plot was a battle. We made the mistake of heading west out of camp and hiked up the ridge and then headed north down the drainage. We would have arrived to the plot faster had we followed the ridge directly north of our camp and then headed east down into the drainage. This plot is on a north facing slope and there were *Picea mariana*. This is one of our only plots with tree saplings. The trees are hard to get around on some parts of the plot.



Photo 3. Point 20 looking south at quadrat A.

Point 15: We had to hike back up the steep drainage to point 15. The bushwhacking was a tough through tall (greater than 3 m) *Salix* sp. When we started the 6A transect I spotted a black bear about 500 meters away on the east slope of the drainage that we were to the west of. The wind was blowing towards us so the bear could not pick up our scent. We did not have binoculars but agreed that it had to be a black bear because it was such a dark black color and the mini-grid is in black bear territory. We watched the bear for 10 minutes and then it headed towards the drainage and closer to us. I kept watch on the bear while James and Abbie packed up the plot and all of our gear. We decided to finish up point 15 the next day when we returned to that side of the ridge to do other plots. We never saw a bear at this mini-grid again.

Point 10: Keeping an eye on the bear and armed with bear spray we headed south up to the ridge that our camp was on and to point 10. Point 10 is in open, alpine vegetation. The bear headed into shrubs and we lost site of him. At point 10 we watched for the bear another 10 or 15 minutes and then started to set up the plot. Abbie spotted the bear at the top of the ridge about 500 m from us. Again we packed up and watched the bear as he ran down the drainage on the other side of the ridge. We watched the bear for another 10 minutes until he disappeared over another ridge and down into the Bearpaw River drainage. At this point we estimated that the bear was over 1000 m away and moving further away from us so we proceeded to set up the plot.

Weather: The day started off foggy and rainy. Towards the end of work at point 20 the sky began to clear. The weather stayed clear throughout the work we started on point 15. At point 10 it stayed partly sunny with a light northeastern breeze until the end of the day.

Sunday, July 9

Point 15: We started the day by returning to point 15.

Point 25: Next we headed further north to point 25 (photo 4). We crossed a running creek and then hiked up a rock slide to the plot. Point 25 is located on the rock slide and the plant diversity and abundance is very low.

Point 24: To get to point 24 it is best to hike back down the rock slide to the creek and then hike straight up the steep hill. We stopped and pumped water at the creek before heading up hill. The climb up looks much worse from point 25 than it actually is. I do not recommend circumnavigating around the hill to get to an area of less steepness. The bushwhacking is probably worse in other less steep parts of the hill. On point 24 the vegetation is open alpine.

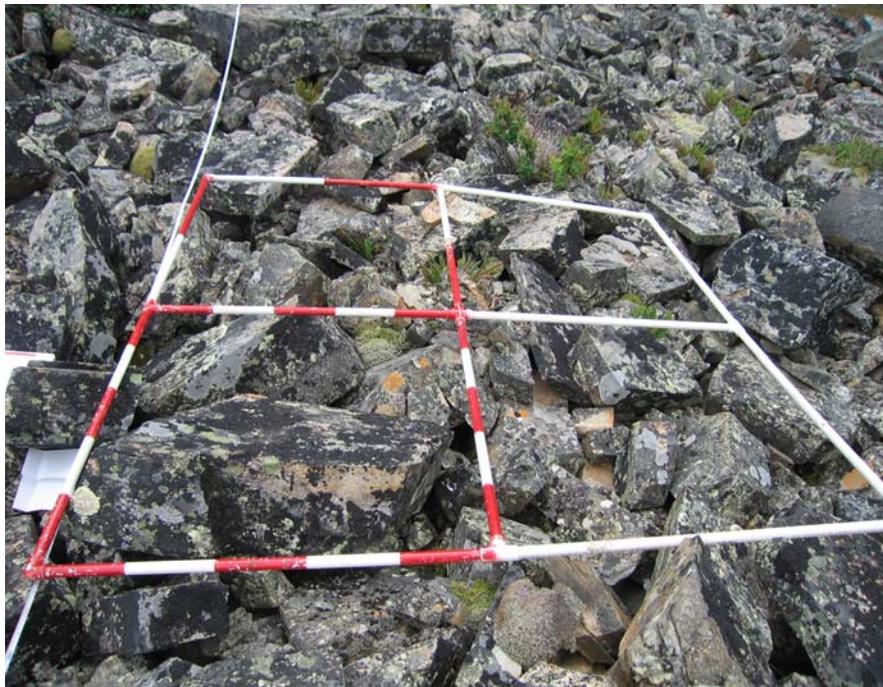


Photo 4. Point 25 looking east at quadrat A.

Point 19: Next we headed 500 meters south to point 19. The plot had a slight slope, was open and there was high abundance of moss and carex as well as many sinkholes.

Weather: The weather was beautiful all day.

Monday, July 10

From 8 am to 8:40 am we calculated our hours worked and then individually called our hours in to Nikki.

Point 22: From camp we headed northeast to point 22 (photo 5). We found *Boletus* sp. mushrooms en route to plot.

Point 23: Next we headed downhill 500 meters through thick *Alnus viridis* cover to point 23. Part of the plot lies in a thick *Alnus viridis* stand. We finished work at this point by 2:30 pm.

Point 18: To get to point 18 we hiked uphill 500 meters with a 200 to 300 meter elevation gain. There was some bushwhacking through *Alnus* sp. along the way. The plot lies in open carex, moss, *Betula nana* and *Vaccinium uliginosum* vegetation.

Weather: The sky was almost completely clear and there was an unobstructed view of Denali. Half way through the work at point 23 it began to lightly rain and thunder. The sun did shine on and the storm passed.

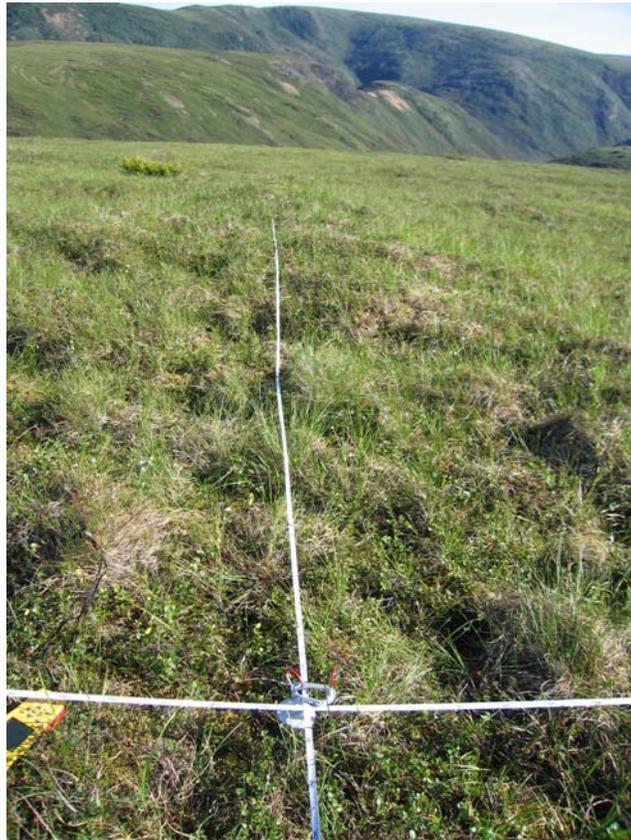


Photo 5. Point 22 looking to the south from plot center.

Tuesday, July 11

Point 2: From camp we headed southeast down to a drainage to point 2 (photo 6). We had to do some bushwhacking through *Alnus viridis* and hiked through knee high *Betula nana*. The bugs at the plot were very bad.



Photo 6. Point 2 looking southwest at landscape.

Point 3: The hike to point 3 was back up hill 500 meters with a 200 to 300 meter elevation gain. We hopped over a running creek and bushwhacked through *Salix* sp. The plot lies in open alpine vegetation.

Point 8: Next we headed to point 8, the highest point on the grid. This plot was less than 200 m east of our campsite. The plot lies in open alpine vegetation and there is a lot of rock and gravel.

Weather: The morning was dry and crisp with a blue sky and a few clouds. The weather stayed clear and dry through work on point 3. At point 8 the sun was shining and it was hot, but there was a strong breeze to keep the mosquitos away. Back at camp while dinner was being prepared a severe thunderstorm began to rumble in the south. We got some wind and a light shower.

Wednesday, July 12

At the 8 am check in with dispatch James was told that the helicopter would pick us up at 11 am. Abbie and I packed up our tents and gear.

Point 13: Then we all headed about 400 meters northwest to point 13. The plot is on a gradual hill covered with carex and moss tussocks. The vascular and non-vascular plant diversity is low.

After the work on plot we headed back to camp. We finished packing up and waited for the helicopter. George did not arrive until after 12 pm. We were the first crew to start the rounds of taxiing. Abbie and I were flown to the Kantishna air strip and then transferred over to Collin's fixed-wing plane. The weather turned cloudy, foggy and it began to rain. Collin did not feel it was safe to fly so we waited at the airstrip for an hour before the weather became safe for Collin to fly. We flew to the Headquarters airstrip and then Collin drove Abbie and I to the office. We did not reach the office until 3 or 4 pm.

At the office we photocopied, washed, organized and downloaded everything that needed these things done. I did not leave the office until 6:30 pm.

Weather: The weather was beautiful in the morning. But as the morning moved towards noon the clouds thickened into rain clouds and it was raining by the afternoon.

CONCLUSION AND FUTURE CONSIDERATIONS:

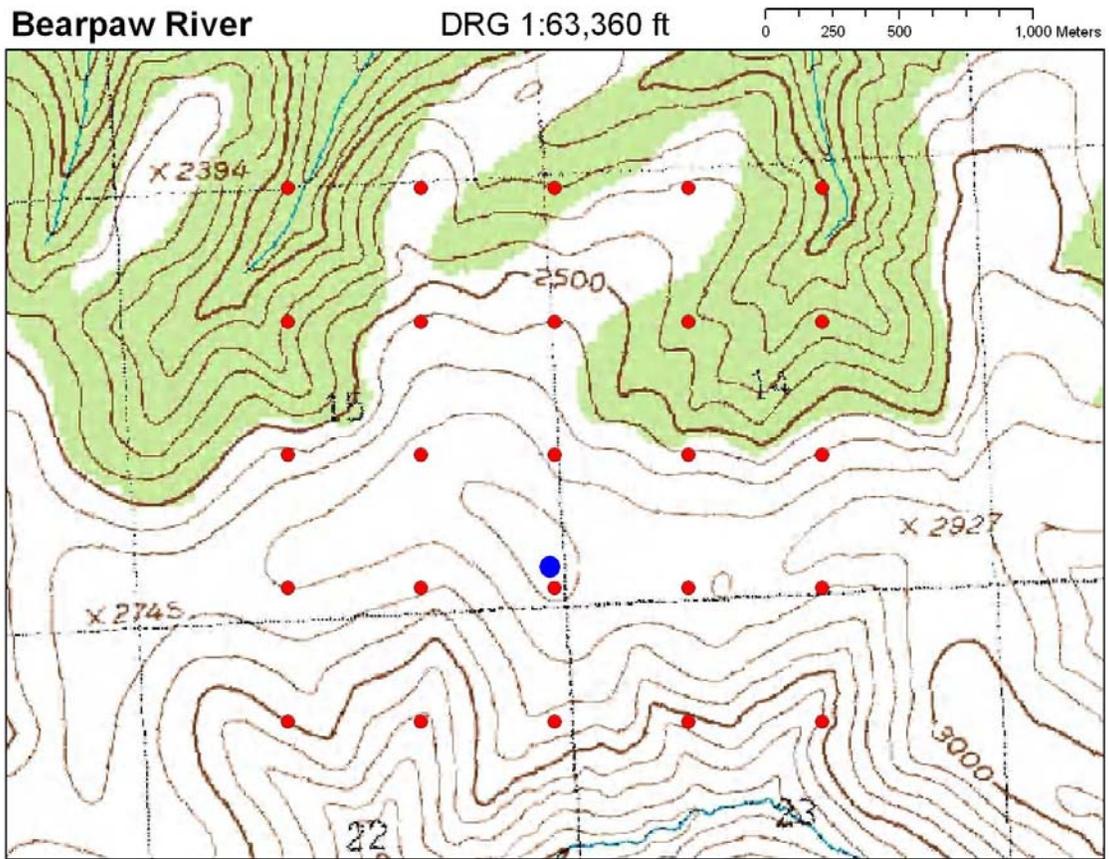
It was convenient to have all the water jugs by the camp, but in the future it may not be necessary to take all 5, 5 gallon jugs of water. If planned correctly, future crews can pump water at running creeks en route to plot and at the end of the day when heading back to camp.

It may be more efficient for future crews to drive out to the Kantishna airstrip rather than fly out in the fixed wing. We were able to fit most of the gear (Peter and Carl flew to their mini-grid at Kanknone Peak with their personal gear and some field gear) and 4 crew members into one Ford Expedition Park Service rig.

Do not forget to bring bearspray and carry it at all times. Bushwhacking through shrubs made visibility very low and there are bears in the area.

We really appreciated our cook tent when it was raining or windy.

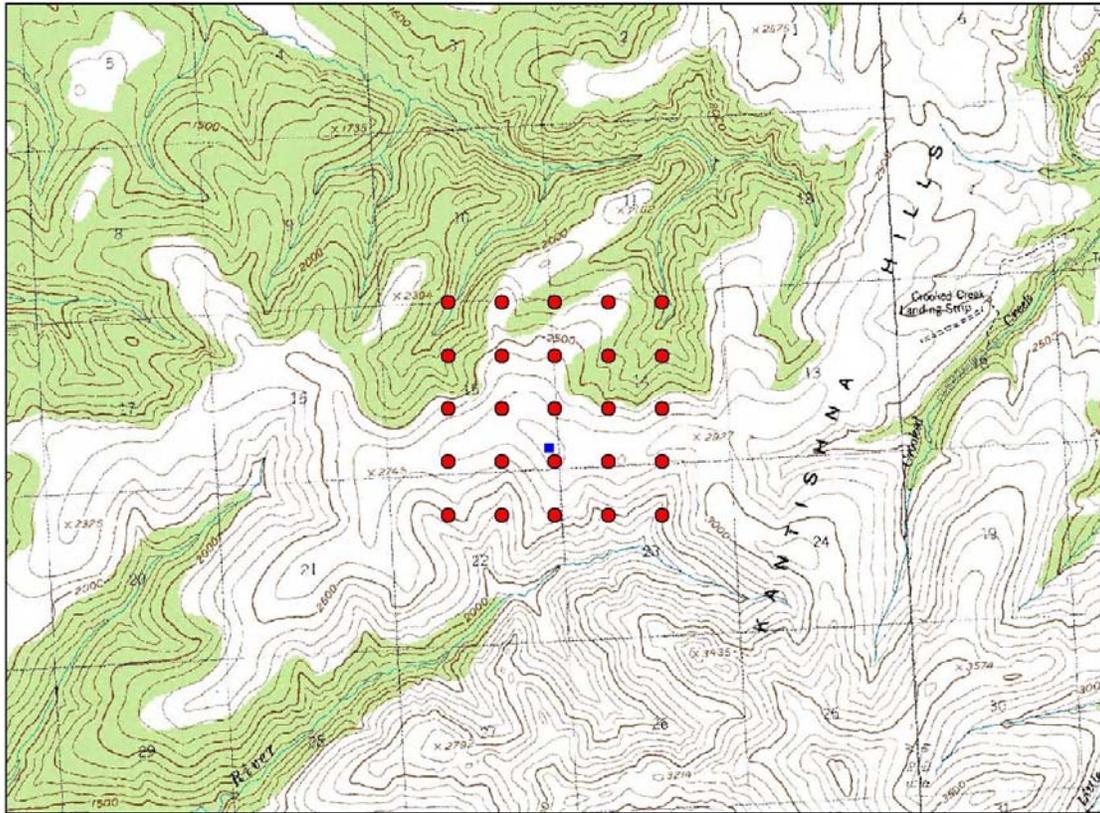
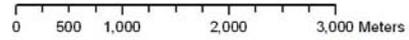
The mosquitoes were pests but because we were in a variety of habitats which included open windy ridgetop tundra the bugs never got to be unbearable. I did wear my bug shirt and mask at some times, but I went without the bug shirt more often than with.



Map 1. Mini-grid. The blue dot indicates the area that we camped.

Bearpaw River

DRG 1:63,360



Map 2. Mini-grid. The blue square indicates the area that we camped.