

Endicott Gap/Endicott River Trip Report

*By John Neary, Tania Lewis, Dan Lesh*

August 11-18, 2011

Glacier Bay National Park

Endicott River Wilderness, Tongass National Forest



First night of camping along the Goddess River, Glacier Bay NP



Endicott River between Endicott Lake and Base Camp

### Goals for this trip:

#### US Forest Service:

- Assess use of four unimproved airstrips (unimproved gravel bars) and impacts to resources
- Collect lichen tissue for analysis of air quality
- Survey for invasive plants, primarily dandelion that was previously reported
- Strengthen partnership with National Park Service (NPS) and Southeast Alaska Conservation Council (SEACC)
- Determine if hiking into airstrips is worth the risk factors involved

#### National Park Service:

- Assess the likelihood of intentional or unintentional poaching on NPS lands from unimproved airstrips in Endicott Wilderness
- Investigate the possible change in the hydrographic boundary divide
- Conduct wildlife and habitat surveys to determine probable corridors and movement patterns of bears and moose through the Endicott Gap
- Strengthen partnership with the US Forest Service (USFS) and SEACC

#### SEACC:

- Gain skills, information and connections useful in designing SEACC's growing Wilderness Stewardship Program
- Assist the Forest Service in improving the Endicott River Wilderness's (currently deficient) scores in multiple categories under the Chief's 10-year Wilderness Stewardship Challenge
- Collect solitude, air quality, invasive species, and general ecological data; complete recreational site surveys; and map routes in order to improve the management of the Endicott River Wilderness.
- Strengthen partnership with the USFS and the NPS, and be part of a groundbreaking cooperative effort between federal agencies managing neighboring wilderness areas.
- Communicate results gathered during the trip to the public to increase understanding of wilderness management issues and appreciation for wilderness areas in general.

### Basic Itinerary:

#### **August 10** – To Gustavus

John Neary (USFS) arrived Gustavus @ noon via ferry MV LeConte and met NPS biologist Tania Lewis and law enforcement ranger Bethany Vanderzanden as well as other NPS resource management staff. Neary viewed a video of Glacier Bay National Park at visitor center for backcountry orientation, borrowed one bear resistant container, and coordinated gear with Tania and Bethany.

#### **August 11** – Gustavus to Goddess River

Left Gustavus at 0845 on NPS research vessel "Capelin" with Captain Justin Smith, Tania, Bethany and Dan Lesh (SEACC), plus four NPS Necky kayaks (plastic Narpas and Eskias). Light rain and low cloud ceiling limited our visibility. Dropped off on Muir Point at 1130 where we loaded kayaks and began the paddle toward Adams Inlet, stopping briefly to chat with visitors at the campsite near Dirt Glacier.

Flooding tidal current into Adams allowed arrival at Goddess River estuary by 2:45 PM. En route we passed hundreds of mergansers and long tailed ducks rafted near the Adams glacier outwash as well as Canada geese on shore throughout the inlet. Harbor seals and harbor porpoise appeared to be actively fishing in many places. At the mouth of the Goddess River we observed what we believe to be a ferruginous hawk soaring and calling above us.



Evidence of unauthorized landings near Goddess River mouth, GBNP

We stashed kayaks (with some food in bear resistant containers) on the beach where other rangers have camped in the past, packed up our backpacks and walked up river across the open silt-gravel-rock outwash. Wheel-plane landing tracks along this route indicated unpermitted landing of an aircraft just west of the mouth of the Goddess River. Wildlife tracks on the outwash included moose, brown bear, and wolf. We arrived at camp on the main river channel at 5:30 PM at a spot we decided would make a good crossing of the river the next morning, approximately ½ mile below the junction with the East Fork of the Goddess.

### **August 12 – Lower Goddess River to Endicott River Base Camp via East Fork (E. Fork)**

At 0845 we decided to cross the main river channel near base camp in order to make our way up the E. Fork route used by FS wilderness rangers in 2004 during their descent from the Endicott Gap (Hood et al, 2004). River crossing was safely accomplished with some difficulty by linking arms and traversing in an upstream-downstream line, but the water was well above the knee and current was strong. Trekking poles were very helpful for the most upstream and most downstream crew members and lightweight “Wiggy’s” hip waders were helpful (those without leaks anyway). Although we brought a pack raft for potential ferrying across this river it was not used, and perhaps would have been less safe.

We had some question about the exact location of the E. Fork at this point due to clouds obscuring the larger peaks that form watershed divides, but it was easy to identify as the first major valley we approached. We scrambled up and over the sandy, high-bank of the river and into the E. Fork valley, walked about ½ mile upstream and at 1015 we easily crossed this lower-volume channel using waders. We had a snack then stashed the pack raft and trekking poles in the brush on the south bank before continuing another ¼ mile up the valley to the start of our bushwhack (off-trail hike, aka, schwack). We had some question about the exact location to ascend the south bank in order to best intersect the route used by 2004 rangers, but without GPS way-points we ascended slightly west of their route through thick alder/willow/cottonwood with interspersed openings that became much steeper and thicker toward the summit of the ridge and for a short distance into the thicker spruce forest above.

About an hour later and once into the spruce, the terrain became mostly hummocky, the understory vegetation decreased and the forest walk was quite reasonable. We continued on a SE course through the



a welcome sight - Endicott Gap moose trail through low willow

forest for some time, reluctant to leave it for the fabled “moose highway” through the “Serengeti” traversed by previous rangers. This is a game trail along the base of the ridge through low willow and soapberry interspersed with stunted spruce and open areas of moss and lichen. 250 years ago this area of the gap was covered in a massive ice sheet extending from Adams Inlet and draining into the Endicott River (Appendix A illustration). As the glacier retreated, the subsequent rocky outwash and trapped underground ice led to poor soil and drainage development resulting in stunted spruce with multiple, dead apical-meristems and abundant willow with likely poor nutritive quality. While grazing by moose was apparent, Tania was surprised that the willow was not more hammered given the number of moose tracks and trails. She was also surprised by the lack of abundant bear sign on the “moose highway”. We found no good rub trees, only 1 dig and a couple scats.

We celebrated easier walking and interesting terrain along this moose trail with good views all around as the sun began to poke out. We found our first dandelions in this area. At first we were unsure whether these dandelions were the invasive or native species.

They were somewhat sparse but consistent where the trail was well-trodden and located in a more open environment. Later in the trip we documented both invasive and native species, and were able to determine that the species we found on August 12 were invasive dandelions. As the game trail entered denser forest at the Endicott Gap NPS/USFS boundary it turned SW before crossing through thick forest and popping out onto the overflow channel of the Endicott River near the base camp previously used by rangers. We set up camp here at 4:30 PM as the clouds continued to lift and the mountain views improved. Wow, it’s a beautiful spot.



Base Camp (58.82011, -135.70055), Endicott River Wilderness

### August 13 – Base camp to Bar 1



Dan leads the team around Endicott Lake

The primitive airstrip known as “Bar 1” is just below 2000’ elevation near a pass (Gods-End Pass) that drops into the upper E. Fork. We prioritized this as our first day-hike to take advantage of sunny weather and were rewarded with excellent views and conditions. We started at 0830 by scrambling along the north bank of the Endicott River and around the lake, then up the outwash (old lake bed) above Endicott Lake to the junction of a creek coming down from the basin below Gods-End pass. Animal observations along this route include spotted sandpipers, and unknown species of vole, abundant moose tracks and a few wolf and brown bear tracks. We missed the

excellent ascent route from the river to the alpine discovered by rangers in 2004 by overshooting that creek (obscured in thick forest) and followed the next, and much smaller creek that descends from the lower flank of the spire peaks. We traveled up steep Sitka Spruce and Hemlock forest with blueberry, fern and moss understory and found evidence of porcupine and black bear grazing on the bases of spruce trees. This route brought us into lush head-high riparian shrubs complete with nettles that weren’t so fun, but thanks to Dan’s GPS we realized the mistake and scrambled back across the slope

toward the correct basin, emerging above and east of the airstrip (Bar 1) five hours after our start at camp. This alpine meadow had excellent views of the basin and a group of 21 mountain goats above us to the east at about 3000' elevation. We also spotted two black bears, one in the high alpine of the 3610 peak to the west of Bar 1, and another moseying from Bar 1 up the ridge to the east.

Bar 1 had been used in the recent past as evidenced by discernable tire tracks in the gravel. Tania and Bethany walked north from the strip across the park boundary but found no evidence of recent use



Bar 1 viewed from the east.

despite the ease of walking access from the strip across open and flat terrain. Small streams originating from small ponds (dry) drain the pass at the park boundary in both directions. A gravel outwash moraine descends from the hanging glacier to the east (the "coliseum") into the creek bed creating the hydrographic divide. All indications were that the hydrographic park boundary is correctly mapped in this area. Tania found fresh wolverine tracks in dried up sections of the creek. She also observed abundant bear root (*H. alpinum*) on the moraine and was surprised by the lack of digging for this high quality brown bear food.

Dan and John walked around and below the strip, finding only a bit of very old litter, a couple of very old cans, a rusty pot and a spike with a blue top. We left these in an obvious spot near the strip for a pilot to remove. At 4 PM we made the first satellite phone call with decent reception and then quickly descended from the strip to the Endicott River via an excellent game trail. Walking downstream along the lovely creek we found the first real bear-marked rub tree and collected a hair sample. A goshawk acted alarmed at our presence at the bottom of the trail near the river and separate shrieks heard from up the creek as well as up the river indicated potentially two other goshawks in the area. We arrived back at base camp by 7:30PM.

#### **August 14 – Base camp to Bar 2**

We decided to move camp to Bar 2 airstrip to get closer to Bar 3 and 4. We left a little food behind in a tree before crossing the Endicott River at 0930 at the south end of the overflow channels that surround base camp. Lack of rain for about 48 hours helped our crossing. The forest on the east side was mossy and easy to traverse for more than a mile along a high bench until we reached steep terrain that forced our descent. We saw 2 merlins, a cow moose, and watched 2 Canada geese in the Endicott River before dropping down a nice game trail through open spruce and willow. We found a couple bear rub trees on this route and collected 2 hair samples. We crossed the river through silty muck at a point about  $\frac{3}{4}$  mile above Bar 2. Waders again allowed an easy, but slippery, crossing. We found one set of fresh brown bear tracks in the mud by the river along with multiple sets of moose tracks. Rather than fight thick willow near the river bank, we followed advice to walk inland 300-400 yards into open areas for easier walking. A short while later pink flagging marked our arrival at Bar 2, at about 1:30 PM. This strip has been recently cleared of vegetation, not only short spruce and willow bushes but also mature cottonwood trees of 12" dbh with leaves that were still green. A chainsaw was used as evidenced by the

chips. Hunters are perhaps clearing the strip in anticipation of the moose season. We established camp near the strip and settled in as the weather began to deteriorate.



Evidence of chainsaw use around Bar 2 where at least eight mature cottonwood trees were very recently cleared

### August 15 – Bar 2 to Bar 4

This was our wettest and coldest day with a strong front bringing heavy wind and rain. We left camp at 0845 and headed toward the SW end of the strip where the mature cottonwood trees were cut. There were also other mature trees cut across the river, perhaps for approach or take-off, but why would this be necessary when the strip has been established for some time? We continued toward Bar 4 trying to skirt the “glacial swamp” which was impossible. It’s a mucky outwash area where the stream from a high basin braids out into multiple rain-swollen channels on the flats. The devil’s club and alder is fairly thick which added to the fun. We tried to climb above this zone onto the slope but were thwarted by steep avalanche paths and thick vegetation, so back down to the “swamp” we went for another hour of schwacking toward Bar 4, finally popping out into fields of willow and nagoonberries at 1130. A large bull moose galloped off as we made our way through the increasingly dense willow and then alder toward the strip.



Gear cached at Bar 4 (58.773530, -135.685180) gear cache is large enough to require a permit. All the items were carefully sealed against easy opening, using torx screws around the lids for example. We continued from the north end of this strip along a great moose trail that ended at the creek, and rather than fight thick brush any more we waded down the river for about ½ mile. A pack raft would have been nice to have

This strip has recent tire tracks but no cut vegetation. We found the campsites in relatively clean condition but the northern-most site contained a large, hidden cache of camping gear under a brown tarp in the dense brush, a messy latrine area, a garbage pit partially excavated by an animal. The



wading a tributary below Bar 4 on way to Bar 2

and perhaps could have floated us down this rain-swollen tributary very near Bar 3. Instead we crossed through relatively open forest and followed bits of moose trail toward Bar 2. Occasional pink flagging was removed, probably left by hunters. The only birds we saw were chestnut backed chickadees. We arrived at Bar 2 near 2 PM, shivering wet. A quick bowl of soup and some mac and cheese amidst the wind gusts was about all we could manage before retreating to our tents.

### **August 16** – Bar 2 to Base Camp

The rain continued all night and the river swelled considerably forcing us onto the west bank route back to base camp. We left Bar 2 at 0845 and traversed fairly easy, open terrain for more than half the distance before it changed to sparse forest. About 1 mile north of bar 2 we encountered a goshawk and heard a second nearby. Moose trails were occasionally very helpful and we encountered more open areas of low willow, stunted spruce, and cottonwood, and some additional dandelions.



Native and invasive dandelions juxtaposed (native on left, invasive on right); close-up of identifying characteristic on native dandelion (triangular protrusion on the green involucral bracts under the flower)

The rain gradually diminished and by the time we arrived at the fabled “enchanted forest” with its hummocky terrain and dense spruce and alder thickets we were ready to meet the challenge. We found a small ungulate jawbone and corresponding sized pellets indicating at least transitory use by Sitka black-tailed deer. Steep, short ascents and descents across the hummocks were indeed difficult but upon arrival at an old river channel that included some pothole ponds, it became much easier and more open. Six Canada geese were at one pond and winter ptarmigan scat was observed in the dried up channel. The old channel was easy to follow for the last ½ mile directly to the open gravel bars of base camp, where we arrived at 1 PM.

Dan and John dropped packs and continued to the lichen plots established in 2004 to collect lichen tissue for analysis. We first did plot 508 (58.82384, -135.6939) atop the hill near the river before returning to the area behind camp for plot 507 (58.82158, -135.70259). Each took about an hour of collection and Dan’s knowledge of lichens and his extra height were a big help in reaching for the *Alectoria sarmentosa* on tree branches. The clouds began lifting and breaking as we returned to a much appreciated camp fire. A merlin flew over camp that evening.

### **August 17** – Base camp to Muir Point

At daybreak we heard many birds making a gull-like call from all around us in the Endicott River valley. While we did not see the birds, Tania suspected marbled murrelets alighting from their old growth

roosts and heading to the ocean for the day. We left camp at 0900 intending to follow the “moose highway” to the East Fork, but instead proceeded down an established bear trail heading NW from the large spruce trees near base camp. Tania coerced the rest of the crew into trying this new route stating “what’s the worst that could happen – the trail disappearing into the thickest alder patch imaginable?”. The main trail was excellent for the first hour as it trended westerly toward the South Fork with abundant rub trees for bear hair collection then the trail disappeared in the thickest alder patch imaginable. This left us a couple of additional hours of serious schwacking through thick brush where John lost his bear spray. We arrived at the steep bank above the South Fork at noon. Just below our lunch spot was a tributary stream with spawning pink salmon (a previously undocumented salmon run, to our knowledge), the first of two spotted on our descent toward the East Fork tributary which we easily made by 1:10 PM. We saw several sets of fresh brown bear tracks and a few partly eaten salmon carcasses along the way, and a redtailed hawk near the confluence. Tania and Bethany walked the ½ mile up the East Fork to retrieve the pack raft and trekking poles stashed earlier, while Dan and John scouted a river crossing. A black bear walked up the opposite bank of the E. Fork as we joined back together as a group. Dan opted to inflate and use the pack raft to descend the river to our kayak stash, while the other three walked out. The packraft journey was safe and uneventful with no major sweeper trees blocking the river, though the river braided extensively requiring some walking and wear and tear on the packraft bottom. The other three of us linked arms and easily crossed the Goddess above the E. Fork junction, then continued down the west side all the way to high tide at 4 PM. We saw tracks of wolves, moose and possibly coyote. We also heard what sounded like a large pack of wolves howling from the Berg Creek drainage across Adams Inlet.



South Fork of the Goddess River, just above our descent route

High water blocked our beach route back to our kayaks and just when Bethany, John and Tania could not take the thought of one more shwack, Dan appeared by kayak towing the remaining 3 kayaks with all the stashed gear. After a quick snack we paddled kayaks back through Adams Inlet to Dirt Glacier campsite through misty rain on an ebbing current, arriving at camp by 7:40 PM. En route we saw murrelets, Canada geese, pigeon guillemots, harbor seals and harbor porpoises.

### **August 18 – Muir Point to Gustavus**

Ward Air couldn’t make it through thick fog to Muir Point to pick up John and Dan as scheduled, but fortunately the RV Capelin returned us to Bartlett Cove. Dan caught an Air Excursions flight to JNU and John arranged for an Alaska Airlines flight later in the day.

#### Summary reflections:

Our goals for the trip were largely met. We reached three of the four unimproved airstrips and documented impacts to resources, including the extensive cutting of trees and brush at Bar 2 and the large gear cache at Bar 4. We could have reached Bar 3 if the weather was better, or if we had pack rafts to float from Bar 4, or if we had another day. The collection of lichen tissue was fairly easy and the samples survived well the harsh conditions on their trip to the lab, i.e., squished into a backpack for a day, and then transferred to a wet kayak, boat, and plane. Care was taken to quickly dry the samples in the Juneau lab upon arrival.

Our invasive plant survey found invasive dandelions in multiple locations, often intermixed with the native species. The extent of the invasive dandelions, and higher concentrations near the airstrips (we noted this at Bar 2, for instance), suggests introduction by users of the airstrips many years previous and subsequent dispersal via wind and animals through Endicott Gap. Manual eradication would likely be prohibitively difficult due to the extent of the introduction, though the density in any one area is less than that observed in other wilderness areas.

Continuous solitude data was collected, documenting the very high opportunities for solitude in this area, though significant small plane and jet traffic occurred over the Gap during our visit.

We determined that illegal hunting on park land is not likely from the airstrips with the exception of Bar 1 at "God's End Pass". In this area goats and bears are likely to pass in and out of the park and the vegetation and terrain is conducive to hunters doing the same. Aerial surveys are likely the most efficient way to patrol this area for illegal hunting in the park during hunting season. The hydrographic divide does not appear to have changed and does not look like it will do so barring a catastrophic event; however, an experienced hydrologist would be better suited to examine this conclusively.

Wildlife surveys indicated that the Endicott Gap appears to be an area of high moose abundance and likely a major corridor in and out of Glacier Bay proper. Bear sign on the gap and in the upper Endicott River valley was relatively low, despite areas of high quality plant resources (i.e. soapberry and bear root). Anadromous fish cannot reach the upper portion of the Endicott River so this area is not likely a big draw for bears in the late summer, and bears in the area may have dropped into the Goddess drainage and other salmon streams in Glacier Bay and Lynn Canal. Based on the two black bears seen in God's End Pass area, we can surmise that alpine habitats provide late summer forage for this species.

It was helpful to include multiple agency and SEACC partners on this trip as each brought unique responsibilities and skills to the party. The USFS is primarily concerned with the use of airstrips and impacts to wilderness character that result, but also shares multiple other concerns such as invasive species, wildlife use, and sound/solitude impacts. It became clear that hiking into this zone is worth the risk factors involved, and while physically challenging it allows a much broader look at the wilderness. The river crossings are the primary challenge but they were safely accomplished with a strong team approach. We recommend continued expeditions using this or similar routes. A route via the upper East Fork of the Goddess directly to the Gods-End pass and Bar 1 would be worth scouting and would perhaps save time in monitoring the bars in the Endicott Wilderness.

Efforts to communicate the results of our expedition to the public were completed via SEACC's Facebook page and word of mouth, though additional efforts are planned. Outreach to hunters and other users of the Endicott Gap airstrips to better track what appears to be growing use of these areas in recent years is recommended. In addition, education of these users about non-motorized alternatives to chainsaws for maintenance of airstrips would be helpful if the opportunity arises.