

Post-Examiner

"a little bit of everything"

Home News Columnists Reviews Special Reports Blogs Literature Poetry Lyrics Authors LAPX Community Events

Dino diggers: Searching for dinosaur fossils in Alaska

PLEASE SUPPORT OUR WRITERS



Dino diggers: Searching for dinosaur fossils in Alaska



Fairbanks-It's over one-ton later and our supplies are ready for take-off from the Fairbanks International Airport. The three of us-including Dolores van der Kolk, a geology Ph.D. candidate from the University of Texas-Austin and her husband Peter Flaig, a doctor of geology at UT-Austin—handled the tonnage no less than three times in our preparations for the next month.

We will be taking up residence in tents along the Colville River on the North Slope of Alaska until Sept. 2. Our Grand Caravan is set to leave Sunday from Fairbanks, laden with two boats, motors, fuel, food, computers, sample bags, cameras and of course, tents for housing.



Colville River is known as a goldmine for dinosaur fossils. (Doug Hissom)

This area along the Colville River near Umiat—about 140 miles southwest of Deadhorse—is known as a goldmine for dinosaur fossils and has been drawing geologists there regularly since the late 1980s. "Dino digger" headlines are commonplace in the media that follow these things. It's also known for the Umiat oil field, which some say holds more

5/5/2016 10:00 PM

than 1 billion barrels of oil.

The terrain along rivers in northern Alaska makes easy pickings for geologists. Over the eons, water has washed through the permafrost and makes for a palatial view of layers of time—some 190 million years. Van der Kolk is heading up this mission, with a working title of "A high-latitude shoreface to coastal-plain transition: The Schrader Bluff and Prince Creek Formations at Shivugak, Uluksrak and Ocean Point Bluffs, Colville River, North Slope, Alaska."



Delores Van der Kolk is in charge of this mission. I'm handling the gear and transporting the rocks up and down the bluffs. (Doug Hissom)

She'll be looking at fossils from former sea creatures and land creatures to figure out that transition is my rough explanation of that lengthy title. I will know more as the trip goes on, not being a geologist. I do know from past experience that shells from the former seabed are laying all over the surface of the bluffs along the Colville.

My job will be to handle the gear on the river and transport rocks from up and down the bluffs. My work this time will not be done with a pen, but a Maddox pick. I'll be carefully scraping earth away so van der Kolk can get a good look at it and tell us what's there. We will then get to haul buckets of the stuff down to camp to ultimately be flown out to Texas for further review.

It shouldn't be easy work. It'll be windy, likely in the 50s during the day and getting colder the closer the calendar gets to September. It should rain and snow and in the morning we will be greeted by fog coming in from the Arctic Ocean. We will work no matter, given the expense, logistics and limited time allowed to work on the bluffs on this trip.



The bluffs are protected because of falcon nests. (Doug Hissom)

5/5/2016 10:00 PM

The bluffs are protected because of, among other creatures, peregrine falcon nests. The land is the part of the National Petroleum Reserve. And while we will be dancing amidst the romance of knowing that dinosaurs roamed the region, our permits prevent us from hauling out the next Pachyrhinosaurus (discovered there in 2006). There will be paleontologists about 10 miles away from us, the nearest humans. But we should see signs of Pachy and his friends here from 70 million years ago.

Steve Hasiotis, an ichnologist from Kansas, who studies trace fossils' tracks, trails and burrows found in the rocks left by marine and land animals will be joining us Aug. 23. He'll be flying onto our sandbar with Annie Miller, a hydro geologist grad student from UT-Austin. She'll be taking core samples while I boat her around.

To get us and our stuff to Umiat, we'll be flying a Cessna Grand Caravan for a few hours, crossing the majestic expanse of the Brooks Range. From there we will be taking a helicopter to our sandbar, which will be home for two weeks. Then we will move north, ending our trip flying out of Nuiqsut, an Inupiat community of about 400 on the Colville where there's an airstrip.

If the planets align with the technology I should be able to send stories to the Baltimore Post-Examiner crowd via satellite phone as our trip proceeds.



Server not found

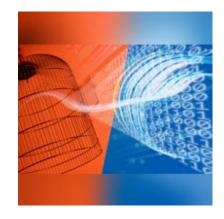
COMMENT POLICY (http://baltimorepostexaminer.com/comments-policy/)

Sponsored

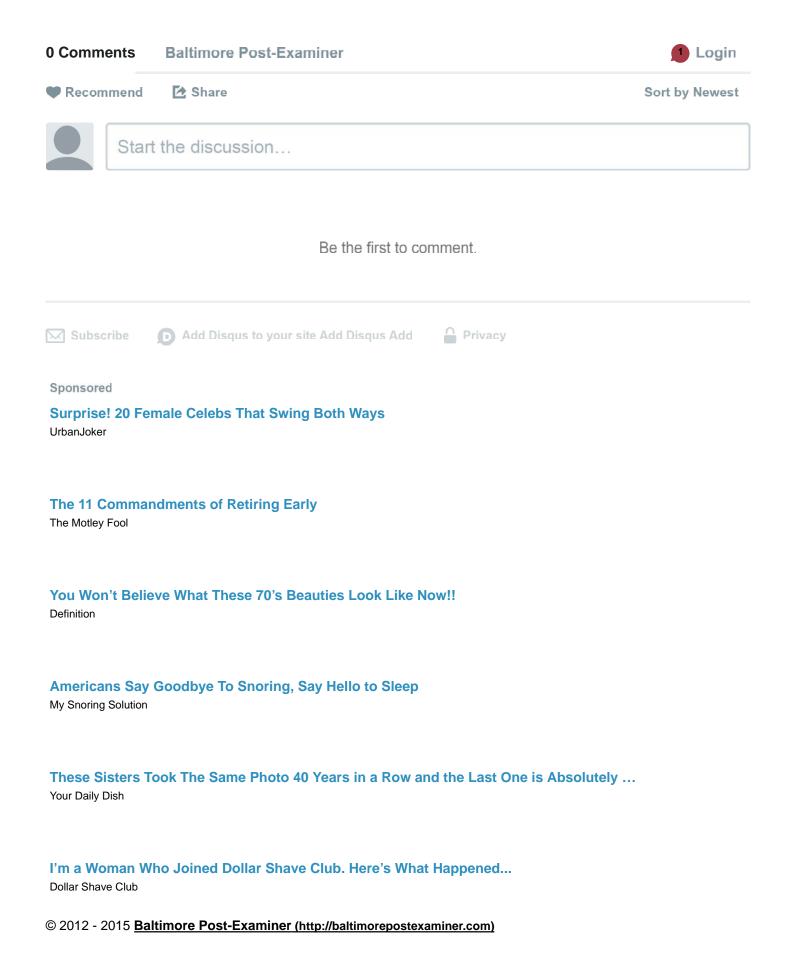
MICROSOFT

You won't believe who Oracle looks up to

Learn More



5/5/2016 10:00 PM



5/5/2016 10:00 PM 4 of 4



Post-Examiner

"a little bit of everything"

Home News Columnists Reviews Special Reports Blogs Literature Poetry Lyrics Authors LAPX Community Events

Digging up dirt in Northern Alaska: What happens when geologists take over the North Slope

PLEASE SUPPORT OUR WRITERS



Digging up dirt in Northern Alaska: What happens when geologists take over the North Slope



"Our friends say we're on

vacation," laughs Dolores van der Kolk. The activities of the day prove far from it. She's sitting on a folding lawn chair along the Colville River in northern Alaska. Our location is a scant few miles from the most remote spot in the largest state in the union—more than 80 miles from the nearest town.



Here I am taking the geologists to the targeted area.

Our "vacation" was 29 days living in tents on gravel bars in the great outdoors of northern Alaska. This was not quite a holiday for most, despite the panoramic scenery of North Slope tundra, the occasional caribou and grizzly, and the fact that the sun didn't set for the most part. It is a workplace of unparalleled beauty.

Van der Kolk, 32, is on the North Slope for the seventh straight year, and her husband, Peter Flaig, is notching his eighth. He finished his doctorate in 2010 at the University of Alaska-Fairbanks and she's working on hers as part of this project. They're both geologists at the University of Texas-Austin, but every August they doff the desks and head to the bluffs.

"We're old school," says Flaig, 43. "We're still field geologists."

Their job is looking at rocks, rock faces and stratigraphy in rivers and shorelines—65 million- 90 million-year-old rivers and shorelines to be more precise. We found them on the sides of 200-foot tall bluffs that tower over the Colville for 60 miles, south of the Arctic Ocean by about 70 miles and about 350 miles north of Fairbanks. They go by the romantic names of Shivugak, Ocean Point, Uluksrak and the much-less-so Schrader Bluff. Through those bluffs runs the ancient Prince Creek formation where dinosaurs roamed and left their bones behind. In that we would find the Liscomb Bone Bed and the Kikak-Tegosiak Quarry—the world's largest concentration of polar dinosaur bones. Flaig's forte was looking at sediments where the bones were, while van der Kolk's interest was marine sediments and trace fossils.

In those shorelines we would find evidence of critters and clams that were hanging out at the bottom of what was then an ocean and are now part of the fossil record. A few million decades earlier further up the bluff we would find trees and dinosaur footprints and bones.

The work part of the day was getting there—and then holding on.

Because the bluffs have overseen the erosion of the tundra for the past several thousand years, their contents are easily viewed by the geologists. Ravines caused from water running off the tundra from above for eons almost uniformly creviced the rock face. The outcrops glisten in the sun; white layers of sandstone crystals grab the light while continuous black lines of coal, yellow lines of sulfurish rock and goldish-orange-brown lines of sand run along the hillsides to an endless horizon to the north. In the sun, it they look like shining mountains. The well-defined parallel layers look from the distance as if someone had drawn them. An occasional disruption in their straight-line progress can be spotted from the base of the bluff. "Dinosaur footprints" van der Kolk called them.

The cliffs are easy to get to by water, which was our commute to work each day. The Colville runs fast, shallow for the most part, and really cold. Draining Brooks Range snow and glacial ice from the south, it's a winding blue artery cutting through the green of the tundra. The banks during our stay were about a half-mile apart. Fourteen-foot inflatable orange Mercury boats with 25 horsepower motors were the vehicles. Water levels were guite low at times and dragging the boats upstream was a transportation mode for a few days. Good thing we had waders.

But then there's the hiking and climbing part. That's what separates these field geologists from their wine-sipping counterparts behind big-city computer screens analyzing data, or those that do helicopter fly-bys and call it adequate research. Backpacks are filled with first aid kits, samples, satellite phones, ground-to-air radios, camera gear, flood and water. So the traveling wasn't light.





Dolores working hard and keeping safe.

Pete and Dolores, being the old hats at this that they are, seemingly hop over the rocks and mud-covered hillsides with a decided lack of trudging. This was not a sport for smokers, as going up was a vertical face at times, pulling ourselves up with the help of the handy Maddox pick. We had to work where the rock was exposed and it would take some precarious footwork to get there.

I'm not one for looking down from high altitudes, so it was easy for me to climb, since I would be looking up for footholds. Going down was a different story, trying to keep the momentum from tossing the body down the mountainside.

Dolores was the bellwether as to whether a route was good or not. When we heard "sketchy" it was time to look for another way. That usually meant that the footing was either too steep to gain a foothold or of the consistency of fine gravel—"popcorn" they called it. Slipping down that stuff meant there wasn't much keeping us from hurtling down the hill with dangerous and uncontrolled abandon. On a few occasions the rushing and frigid water of the Colville was waiting at the bottom, its churning waters moving menacingly as a warning that the footing should be precise. But a controlled slide down the popcorn was a fleet and fun way down.

After getting to the desired layer of sand to study, the geologists became more like goats, at times digging mud ledges the width of their feet to form an ad hoc platform to dig samples or measure sand—at the same time balancing their gear and keeping it from falling off the bluff. In the rare event that it fell it was my job to go back down and get it. They had to work.

While pinned to the side of the hill, van der Kolk and Flaig would trade finds and compare. Standard conversation was over the quality of the sand—whether it was fine, very fine, siltstone, hummocked, or even "fine grain hash." Samples were bagged and hauled back to camp.

It is a sweaty profession.

My job after the geologists were embedded in their hill work was to watch for bears. Grizzlies tend to roam the North Slope, as evidenced by the tracks we saw at most work sites—some recent, some not so. Satisfied I had the most scenic view of the tundra stretched before me, I'd settle down with my .357 holstered to my chest and enjoy the view.



Our home for the trip. Roughing it.

No bears bothered us on land but the zodiac boat bid a hasty retreat after running up on three of them crossing the river one afternoon. The bears' intentions were to get out of the river where we were about to pull in to go to work. Mama bear turned and growled a warning as we approached the 30-foot range with reverse at high rpms. We didn't go to work there that day.

Generally after eight or nine hours on the slopes, retirement to dinner with the Coleman stove was the reward. A lot of water turned into freeze-dried backpacker meals from that stove, but there were also what we thought were gourmet delights of pizza, salmon cakes and pesto. Fire-roasted grayling appeared one night courtesy of my fishing pole.

Our kitchen tent on the shores of the Colville looked like some space-age orange and white mountain dome tent seen on the slopes of Mt. Everest, which is what it was. With no trees to hide behind, the tent we used to cook and converse in needed to be sturdy and staked down enough so it won't blow away in what can become 40 mile-plus winds in a matter of minutes. And we would need that stability at several points during our stay.

The weather didn't really add to any discomfort, except perhaps when fall blew in during the last week, turning the day into a windy, rainy, 40-degree walk-in cooler. We dressed in layers, from long johns to rain gear. Our fearless field geologists couldn't work in the rain, since the bluffs would turn into a mud slip 'n slide making ascent impossible. Those two days we spent hunkered in the kitchen tent studying the previous days' work on laptops, reading, or sitting around sucking up our coffee and tea supply.

The geologists weren't without their technology. At one point, there were four laptops, six cameras, support batteries and a gas-powered generator as part of the gear. A key camera piece was something called a "GigaPan." This computerized robotic panhead and camera sat on top a tripod and, after the program was set, would create a high-resolution panorama one frame at a time, up to 380 pictures. It would take about an hour to do its thing. The result was bluff photos down to the minutest detail—perfect for studying back at home and for poster size or power-point presentations.

The GigaPan is no ordinary camera. Coming in at a price tag of around \$10,000, it was carried in two Pelican cases weighing in at around 35 pounds apiece. Carrying that valuable cargo miles over gravel bars and through willows was a challenge that was never mentioned in the brochure. Imagine carrying a steamer trunk over rocky, ankle-twisting terrain that could break an ankle without malice. Days spent with the camera at first were a treat, since it also meant lying around while the camera did its thing and not having to traverse the cliffs. But once the camera had to be carried over the tundra, the task came with a feeling of dread. Hoisting the cases up on top of the head like some villager going to a well for water seemed to be the least painful way to travel with them.

We were joined by two other geologists after 20 days, Steve Hasiotis of the University of Kansas, and Annie Miller, a UT-Austin graduate student doing her PhD. work on hydrogeology. They were fresh and clean from the city as they got off the Cessna on our humble gravel bar.



5/5/2016 9:49 PM



Hoping to discover that perfect find.

Hasiotis, 49, is considered to be the world's foremost expert on the continental of trace fossils, known as ichnology, the study of tracks and trails animals leave in the sediment. He could identify an trace fossil and most bones within seconds, noting at once in picking up a sliver of rock less than an inch long, "it's a piece of the back of a baby dinosaur." I didn't doubt him. After all, what did I know?

Steve would walk around the shore picking up rocks as if he were a beachcomber. "This is a footprint. This is a rib bone," he'd call out with the excitement of a treasure hunter with a big find.

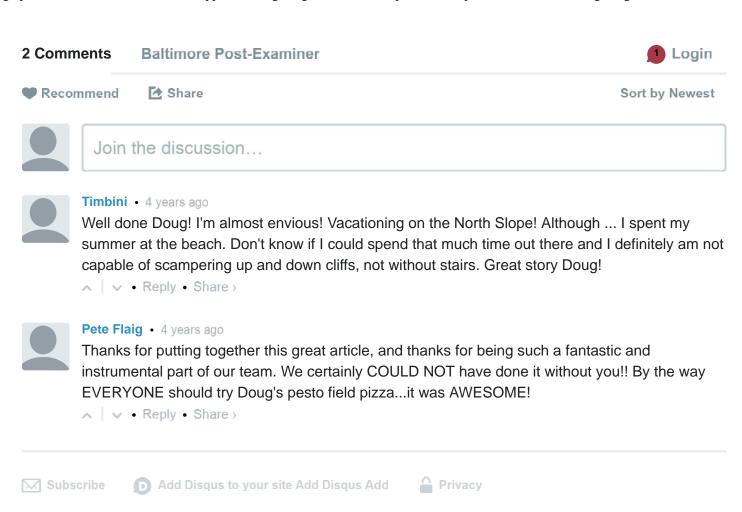
Miller, 30, on the other hand, got a taste of what the harsh realities that North Slope Alaska can do to a person and that there is no margin for error. She broke her fibula four days into her 11-day stay after slipping on a muddy slope. We thought it was a sprained ankle after examining the bruising and consulting the wilderness medical handbook so she rested for a couple days and toughed it out walking for a few days thinking it was a sprain. Getting to the North Slope is not an easy or cheap project and she had to get her work done for the PhD since she knew she wasn't coming back.

It was a stark reminder that we were indeed in the middle of nowhere.

We flew out of the slope off our gravel bar using four flights of a small Helio Courier airplane in a driving wind and rain storm, watching as the snow was moving in. From the air the scenery remained a landscape of beauty that was not harsh, but winter was coming, our time was up and we had to go.

Server not found

COMMENT POLICY (http://baltimorepostexaminer.com/comments-policy/)



© 2012 - 2015 Baltimore Post-Examiner (http://baltimorepostexaminer.com)

5/5/2016 9:49 PM 6 of 6



Post-Examiner

"a little bit of everything"

Home News Columnists Reviews Special Reports Blogs Literature Poetry Lyrics Authors LAPX Community Events

Alaska: North Slope price of admission and survival requires attitude

PLEASE SUPPORT OUR WRITERS



Alaska: North Slope price of admission and survival requires attitude



On the Colville River in Alaska— The chestheaving dose of

adrenaline running though the veins wasn't even close to subsiding as the DC-6 roared to the south. Minutes earlier we were embracing the horsepower and the monstrosity of the plane as it swooped over our camp at less than 100 feet. The ground shook. The intensity of the flyover left a power surge in us that had nowhere else to go but come out in laughs and shouts of amazement. It was a most surreal companion to the morning coffee.

We may have been in one of the most remote spots in Alaska, but we certainly weren't alone.

Geographers put us some 90 miles from the nearest settlement, but the air and the waters of the Colville River were active on a daily basis. The fuel-laden DC-6 wasn't the only plane that would buzz the tents that made up our geology team's camp. Helicopters, jet-props, Cessnas all got in on the fun. Even an Alaska State Trooper flew in for a quick hello and handed out a "junior trooper" badge after writing down who we were in his notebook.

Our camp was about 20 miles downstream from Umiat, a small air base that served as a jumping off point for corporate oil and gas explorers. It's quite convenient for that since it sits on the border of the National Petroleum Reserve, the North Slope's contribution to U.S. oil independence. Tourists in the form of hunters, kayakers and fishermen jumped off there as well.





Launching off before the storm with Annie Miller.

I worked with a <u>team of geologists (http://baltimorepostexaminer.com/field-geologists-break-rocks-bones-while-searching-for-dinosaur-fossils-in-alaska/2012/10/16)</u> who studied rock faces and stratigraphy in rivers and shorelines about 65 million- 90 million years old. We found them on the sides of 200-foot tall bluffs that tower over the Colville south of the Arctic Ocean by about 70 miles and about 350 miles north of Fairbanks.

For 29 days I camped along the Colville with geologists Dolores van der Kolk, Peter Flaig, Steve Hasiotis, and Annie Miller, I ran into a tandem kayak with Scandinavian occupants, a solo canoeist and his dog, another paddler on a travel quest. Paleontologists—dinosaur bone scientists—camped downstream. Power boats from the native village of Nuiqsut—about 90 miles north—would show up now and then, especially toward the start of the Sept. 1 moose season.

Going to the North Slope for tourism isn't cheap. Commercial flights from Milwaukee to Fairbanks check in at about \$1,000. To get from Fairbanks to Umiat requires a private charter from the likes of Wrights Air Service for about \$3,000. A trio of hunters (from Pennsylvania and Kansas) that boated up to our camp with their guide Ray, paid around \$4,900 a piece for a week's worth of shooting caribou and living in tents. A grizzly would have cost an extra \$8,500. Or they could have gone for a 10-day solo grizzly hunt for \$16,000 with "The Grizzonator."

The two-hour flight from Fairbanks to Umiat is a scenic wonderland as flying goes. The flight path winds through the Brooks Range and the Gates to the Arctic National Park, a wilderness area the size of Switzerland. The mountains spike vertically up 9,000 feet from the tundra floor, with snow and glacier-covered crowns. If the weather is clear the plane will go through the mountain valleys, making the cliffs look close enough to reach out of the window and grab a rock.



One of jobs was keeping the team safe from bears.

But the price of admission does keep the crowds down.

Money—and attitude—are the two main components needed for travelling the North Slope, because there is little margin for error between having a safe trip and a full-blown adventure.

The weather is a major factor affecting the attitude. One travel day in our 14-foot inflatables was spent in a sandstorm. The wind picked up into the 40–mile-per-hour gust range and we were chased north by the southern gale featuring sand

clouds the likes of those from the set of "The Mummy." Reading the river was impossible at times.

Howling sand would block the view between our two little craft while white-capped waves crashed over the sides making for a North Sea adventure. Grit-filled teeth, hair and gear were the reward and we finally pulled over and ducked into a grove of willows to set up camp out of the wind.

After the winds calmed and dinner was served, Darrell Gardner, a nurse from Santa Fe, paddled up in a kayak that looked more like an inflatable bathtub and asked if he could camp with us. He was finishing a seven-year on-again off-again 5,700-mile solo trip by foot, bike and boat when he got to the Arctic Ocean. (He has a website (http://www.underhumanpower.com) for his venture. The wind pummeled Gardner, who said he was too tired to go on. It was obvious, though, he wanted to talk to some humans.



Heading out with the gear.

Besides weather, other reminders reared up to raise that margin of error. During a rainstorm a wrong turn put us up the wrong stream. Low on gas, fighting blackening skies, we had to paddle our heavy inflatable for a few hours back onto the Colville to save gas. No map, we called camp on a satellite phone with GPS coordinates to find out where we were. Satisfied we were back on the Colville, we motored through the stress of possibly running out of gas. What was supposed to be a four-hour cruise turned into an 8.5-hour ordeal of the mind.

The stress was what the future would hold if the gas supply failed. Prepared if the tank went dry? Yes. We had brought space blankets to rig a shelter, a stove, cook pot and food, a satellite phone, ground-to-air radio and flares. The best-case scenario after the gas dried up would be a fine little shelter with a fire amidst the willows for the evening. (The reality was that it would have been a long, cold, wet night without sleep.) The next day would have been a walk back to camp through impassible scrub willows and across mud flats from creeks and streams.

Calling a helicopter for assistance may or may not be expensive. Folks working on the North Slope tend to keep an eye on out for each other when they can. When it was thought we were running low on fuel to complete the work, a call was made to Striker Overly, owner of Umiat-based Alaska Arctic Adventures. He sent his guide Craig with 10 gallons for us. Out on the slope that would be about \$10 a gallon, but in a conversation while he was flying over our camp, Overly, circling, said "No charge."

For those wanting the wilderness experience, it's certainly here. The vast expanse of the tundra holds captivatingly stark beauty. As we entered September and it would finally get dark enough at night, Northern Lights would readily come out and dance waves of green, red, and purple glowing curtains of light across the sky. The occasional haunting screech of a peregrine falcon could be heard. An arctic owl would come out in the evening to hunt across the river from camp. There was a seal in the water as we got further north and closer to the Arctic Ocean.



Caribou roam the land in Alaska.

And of course, plenty of caribou, a few moose and some grizzly bears roamed in this wilderness.

We were lucky to have a caribou in our camp. He was old. His beard was grey and blew with the breeze as he walked through the willows on our gravel bar. Some locals from Nuiqsut knew it too. They pulled in at high speeds on their boats and proceeded for a few hours to hoot and holler around the shrubs trying to scare up our caribou. We waited nervously, because we liked the guy. They didn't find him since the boo was later spotted swimming across the river.

The weather had one more hurdle as we packed up for our getting off the slope. The plan was for a Helio Courier—a non-descript, but extremely functional craft—to make about five trips from our gravel bar to the airstrip in Nuiqsut, a native community of about 450. Waiting there was a larger Cessna Grand Caravan to deal with our one-ton-plus load of motors, boats, gear and rocks.

The previous four days of rain had raised the river level overnight to the point that it wiped out our proposed runway for the Helio. Wrights Air Service wanted 1,000 feet and we could only offer 500. We spent seven hours moving the camp one boatload at a time about a mile upstream where we found the requested 1,000 feet of gravel runway.

We sat waiting like refugees on the gravel bar, exposed to cold, rain and high winds until the happy drone of the Helio was heard. It was time to head south and out of the winter weather that abruptly arrived.



Server not found

COMMENT POLICY (http://baltimorepostexaminer.com/comments-policy/)

Sponsored

COMPARISONS.ORG

Homeowners Who Haven't Missed A Payment in 3 Yrs - Read **This**

Banks Outraged by Federal Home Payoff Stimulus Package...

Learn More





Subscribe Subscribe

Add Disqus to your site Add Disqus Add

Privacy

5/5/2016 9:39 PM 5 of 6

Sponsored

Her Red Carpet Transformation Left The World Amazed (Photos)

Livingly

Transfer Your Balance To Pay \$0 In Interest Deep Into 2017

LendingTree

Obama to Austin Home Owners - "Get Free Solar Panels"

Solar America

Ron Paul: "Buying Gold Will Not Be Enough – Here's Next Step To Take"

Stansberry Research

The Original Supermodels - 30 Years Later!

Definition

Don't do it! The game that will have you hooked!

Stormfall: Free Online Game

© 2012 - 2015 Baltimore Post-Examiner (http://baltimorepostexaminer.com)