Iceland in Winter, Part 5 - Ljósin

Ljósin are lights in Icelandic, and chief among them are Norðurljós, the Northern Lights, which we also call the aurora borealis. Aurora borealis . . . the term alone is enthralling. It has always been a goal of mine to experience the aurora live, but this isn't easy to do in Colorado. When I was a teenager, a Mars-red sky appeared over Denver one winter night, when charged particles from the sun swept far south of their usual stomping grounds and glowed scarlet high in the atmosphere. But a red sky is not the same thing as the landscapes of light I'd seen on film. What better place to look for those phosphorescent landscapes than in Iceland, a place so far north that darkness on the Winter Solstice is in some places absolute?

A mid-morning view from our apartment in Grundarfjörður

In February 2013, our Icelandair flight from Denver to Reykjavík favored us with a view of the aurora over Labrador and again over ice-locked Greenland. I was glued to the aircraft window, cupping my hands around my eyes to block out snippets of light from the plane's darkened interior. Ropes and sheets and curtains of aurora arched down and pulsed in slow motion from the north. It was amazing, but the experience still had something of a film-like quality because I was watching it all through glass. The aurora borealis happens when charged particles from the solar wind strike the Earth's atmosphere near the magnetic poles. Our visit to Iceland was expected to coincide with a solar maximum predicted for the winter of 2012-2013, but the sun had been very quiet for months, and evidence of a solar maximum had been almost nonexistent. We didn't know if our view of the Northern Lights from the plane would be all we would see of Ljósin during our trip.

A late morning sun at the black church in Búðir on the Snæffelsness Peninsula

Fortunately, even when the Norðurljós are relatively quiet, they can often be visible over the Snæffelsness Peninsula, and this - no accident - was our destination. Besides, in Iceland, there are other sorts of light to enjoy in the winter. To experience light, one also has to experience darkness, and in the wintry north, there is plenty of darkness to go around. When we arrived in the country, in the space between the shadows of the Winter Solstice and the evenly split days of the Spring Equinox, night was shrinking fast. When we arrived, there were about 8 hours of sunlight. When we left a little over a week later, day length had grown to almost 9 hours. When the sun was up, it hung low in the sky, only a few hands above the horizon even at noon. The sun's low angle meant that we had to use our sun visors almost all the time while driving, and it made the surface of the orca-filled ocean at Grundarfjörður shimmer like liquid silver.

The mid-day sun while riding Icelandic horses at Íshestar

In our part of the United States, people look at you a little strangely if you leave your Christmas lights up on your house past mid-January. Although some light displays challenge the output of our regional power plants in the weeks leading up to Christmas, I have witnessed neighbors taking light strings down as early as December 26, as if they fear that leaving them up any longer would violate some sort of secret Christmas code. But in Reykjavík in February, there were still plenty of lighted decorations to be found. More modest in size and less flashy in nature, small strings of colored lights in courtyard trees and on sparkling harbor boats shone along with bright Moravian stars and tidy little candelabras in the city's windows. Pubs and restaurants also placed low flaming torches outside their doorsteps in the evening, inviting us inside. We never found out if this was part of the city's Winter Lights Festival or if the custom was more widespread. In Keflavík, the town cliff, called Bergið, was illuminated along the harbor. For their own Night of Lights Festival on the millenium, Keflavík placed floodlights on the cliff, but the citizens liked the lights so much, they became a permanent winter custom. We walked along a footpath at the cliff base one evening after dinner at the Kaffi Duus. The path went out to a shed of sorts, which emitted strange, dim lights and even stranger sounds. The soft sighs and groans and a mechanical creaking left me rather uneasy. Later, I read that the shed covers a cave, and in the cave is an animated giantess who is popular in Icelandic children's books. When I was a child, if my parents had led me up that footpath at night to that shed, I would have been scared out of my mind, even if there was a friendly giantess waiting at the end of it!

Joseph working out with a club-bell in the mid-day sun on Djúpalónssandur beach at Snæffelsness National Park.

A sculpture along the harbor in Keflavík, near the town cliff, Bergið

It seemed strange to us, but in a country with so much darkness in the winter, we found lots of fresh, local vegetables in the grocery store. They even looked better than the ones we could buy in sunny Western Colorado. How was this possible? While driving across the countryside later in the trip, we got our answer: large, lighted greenhouses gleaming in the distance. Electricity is plentiful and inexpensive in Iceland, thanks to hydroelectric and geothermal power. Iceland's energy supply is close to one-hundred-percent sustainable. I have childhood memories of long, boring lines of cars waiting at gas stations in Denver during the oil shortages of the 1970's. Icelanders experienced these shortages also, and their response was to create independent, sustainable energy for themselves. They got their clean, abundant electricity, and they got a lot of fresh vegetables in the bargain as well.

Stone sculptures along the harbor in Keflavík. The district of Reykjanesbær, which Keflavík is part of, is filled with sculptures like these.

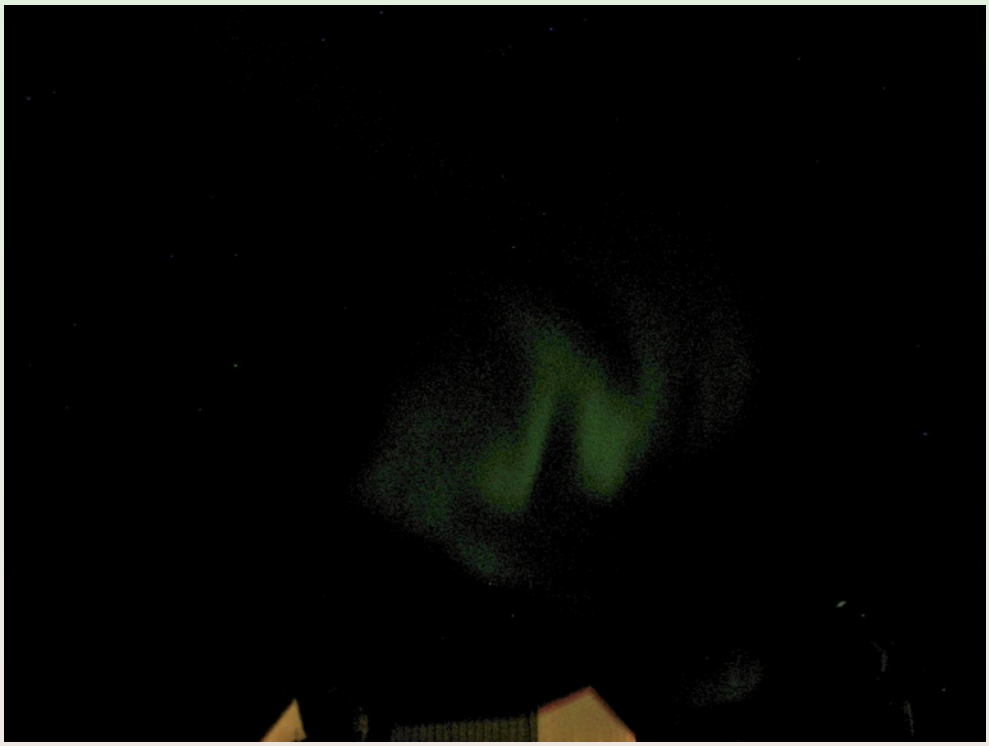
Back in the winter of 1973, when I wasn't waiting in line for gasoline with my parents, trying on a new pair of go-go boots, or wondering what it would be like to be a child in one of the flowered hippie vans that we sometimes saw go by, I might have been out throwing a Frisbee with the neighborhood children in the hour or so of sunlight after dinner in Denver. If my neighborhood had been in Iceland instead of Colorado, I might have been out in the early dark night, making snow angels or stockpiling snowballs to ambush my friends under shimmering curtains of light. I would have rarely given a thought to the exotic aurora while playing and laughing in the snow. With the casual abandon of childhood, I would never have imagined that the Northern Lights were not something everyone could so readily see. If I had grown up above the Arctic Circle, I would never have placed the Norðurljós on a bucket list, would never have traveled so far to try and glimpse them.

The first night Joseph and I stayed in Grundarfjörður, we went outside late and saw bands of pale light in the sky, but we were not sure just what we were seeing. Were these lights the glow of Reykjavik's street lamps across the fjord to our south or were they moonlight from the slivery little crescent that might be just below the horizon? Were the pale, slow moving shapes nothing more than high cirrus clouds against a dark sky reflecting scraps of horizontal rays from the faraway sun? If they were the aurora, they were anything but spectacular. They were pale, pale white and they drifted ever so slowly, just like cloud vapor, but we could see the stars twinkling behind them. We went to bed that night wondering. On the second night, the aurora borealis was undeniable. Around ten p.m., we were just finishing up a late dinner in our apartment (burgers which probably came from Icelandic cattle descended from Viking livestock and fresh spinach grown in volcano- or glacier-powered greenhouses), when a knock sounded on the door. A nice couple from the

The crescent moon over the harbor at Grundarfjörður shortly after sunset

Netherlands, who were staying across the hall, told us that if we wanted to see them, the Northern Lights were out. We spent the next two hours or so sitting on cold rocks near Grundarfjörður harbor, enchanted. I realized that what we had seen the night before had been paler versions of the aurora, because one can't see stars through cirrus clouds! The lights on that second night stretched from horizon to horizon in swaths of green and white. At times, I could actually see them flow and

slowly swirl like water eddies across the sky. At other times, it looked like a great malachite city might lie just out of sight over the ocean. Or maybe an emerald sun in the north was beginning to rise. Once or twice, the lights intensified into bright curtains with purple and blue tinges, shimmering slowly back to green. Some say the aurora makes a crackling sound - and I'm sure it does when the lights are intense, fast, and filled with the power of a huge solar storm - but the lights we saw were silent and ancient. They connected me from my familiar earth to the beautiful stillness of space.



My pathetic little photo of the Northern Lights captured with my camera, which was not suited for the purpose. This photos is evidence that we saw the aurora borealis, however!

In the legends of some northern cultures, the aurora borealis are the spirits of the dead, dancing or playing ball with a walrus skull. In a culture where trolls and ghosts and supernatural beings abound, the medieval Norsemen had surprisingly naturalistic explanations of the lights in their writings, ranging from stray rays of sunlight escaping from below the horizon to glaciers becoming so powerful that they could radiate energy into the sky. I love both the stories and the science, the spirits and the charged particles from space. Either way, Joseph and I have now lived under the aurora. We have danced with the spirits and the solar particles, even if it was only for a few winter moments in a dark country filled with light.

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End Notes:

Colors in the Aurora Borealis:

Red aurora comes from particles in the solar wind interacting with oxygen in the very high atmosphere (about 150 to 200 miles high). A different form of oxygen lower in the atmosphere produces a green aurora when it is hit with charged particles. Purple colors come from nitrogen in the high atmosphere (over about 60 miles), while blue lights come from nitrogen lower down. Red aurora is usually not as visible to people on the ground as the other colors, so it is unusual to see a totally red sky like the one I saw over Denver. However, other forms of the aurora can be more spectacular. A beautiful time lapse video by Tor Even Mathisen catches the aurora nicely on film at http://vimeo.com/16917950.

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Winter Solstice and Sun Coffee:

Along the southern coast of Iceland, there is always a little sunlight, even on the Winter Solstice. In the northern parts of the country, however, the sun doesn't rise in the depths of winter. To those living in deep valleys or fjords, it is even darker, so when the first sunlight reappears after the solstice, it is understandably a happy time. Icelanders have a tradition called "sun coffee," where they drink coffee together to celebrate the return of the sun. This celebration occurs at different times in different places across the country because you can't have the coffee until you actually see the sun.

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Solar Maximum:

A solar maximum is an uptick in the activity of sunspots and solar flares that create the charged particles in the solar wind. Solar maxima generally happen in predictable cycles, and the peak of such a cycle had been expected to occur in the winter of 2012-2013. We planned our trip to hopefully coincide with the solar maximum. However, until April 2013, sunspot activity was low, defying expectations. In mid-April, a massive flare launched particles toward Earth, creating visible aurora as far south as the American midwest.

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Winter Lights Festival:

Every February, the citizens of Reykjavik celebrate the Winter Lights Festival to celebrate the lengthening days. In the city, museums are open with free admission, there are free concerts and special programs, and there is a free party at the city's large geothermal swimming pool. The 2013 festival began before we arrived, and because of our schedule and jet lag, we missed most of the activities. However, we did get to visit some of the museums, and although we had to pay admission, it wasn't high and we didn't have crowds to contend with. Many of the lights we saw in the city may have been related to the Winter Lights Festival. In nearby Keflavík, a Night of Lights festival is celebrated in September. There seems to be plenty of celebrating lights in Iceland!

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Kaffi Duus:

The Kaffi Duus is a very nice restaurant along the harbor in Keflavik. They serve fresh Indian curries along with traditional Icelandic dishes. The restaurant is near the lighted cliff of Bergið and its resident giantess. If you go in the other direction, you can walk along the waterfront and enjoy several nice art sculptures, vistas of Faxafloí (the body of water between the Reykjanes and Snæffelsness peninsulas) and the mountains across the water, and you can climb on the retired fishing boat, the Baldur. The boat was about Joseph's age, but it looked a lot older!

A picturesque, rusted anchor and the fishing boat, the Baldur, along the waterfront in Keflavík.

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Herdís' Giantess:

A popular series of Icelandic children's books written by author Herdís Egilsdóttir began with "Sigga and the Giantess." Her sixteen books have been popular with children in Iceland for decades. In 2008, an animated version of one of the characters, the giantess, was built in this cave in Keflavík as part of their Night of Lights festival. The giantess is reported to sigh and belch, which explains the weird sounds we heard.

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Explanations of the Lights:

In about 1250 AD, a text called “The King’s Mirror” (also known as the “Speculum Regalae”, or “Konungs Skuggsjá”) was written. In this text, the “marvels of Greenland” are described, which include the Northern Lights as reported by the Viking settlers. A translation of the passage on the lights posted by the “Viking Answer Lady” is at http://www.vikinganswerlady.com/njordrljos.shtml. (To return to the travel journal from the website, use your browser’s back button.)

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