

## Jim Lindsay's Biography and Travel-Log of 2018

As routine, Becky and I took a cruise to the Caribbean-Islands during Spring-Break. This time Mike Stevens, (our very good friend), joined us to the **ABC-islands**. These Leeward Antilles islands are located offshore in northern Venezuela and from west to east they include Aruba, Curacao, and Bonaire, and are often called the **ABCs**. Geology of the **ABC islands**, is located in the boundary zone between the South American tectonic-plate and the Caribbean-Plate. The core of the islands, Aruba and Curacao are composed of ocean floor-basalts that were extruded onto the seafloor during the Cretaceous Period. In contrast, Bonaire seems to have the geology of an Island-arc terrain with deformed-folding of less dense sedimentary material. Mike, Becky and I snorkeled in Bonaire and Aruba along with exploring a cave on Curacao. Pictured below is Becky posing at the Labadee port in Haiti on the way to the **ABC-islands**.



This summer I took a solo-trip to Scandinavia. As soon as I landed in Oslo, Norway; I immediately started my trek in Stavanger, Norway. There I visited, **Preikestolen, "The Pulpit"**. **The Pulpit** is a massive square chunk of rock that towers above Lysfjorden. This fjord is the southern norwegian port of Stavanger and formerly the world's sardine-capital and now headquarters for the country's offshore oil industry.

To get to **"The Pulpit"**, I had to take in a 2-hour hike from the village of Jossing, (near and across the fjord from Stavanger). The view, (pictured below left), from its bare rock summit, is magnificent, commanding almost the whole of the fjord itself. Its light blue, crystal-clear water

reflecting the clouds passing overhead. (Pictured below right), The rugged, rocky Rogaland Mountains to the north and the Vest-Agder range to the south are peppered with shining, light green patches of vegetation.



**Preikestolen** was most likely formed around 10,000 years ago, during the last Ice Age. As the glaciers melted away, and the Lysefjord, was formed and the now-famous cliffside was exposed. Before the start of the Ice Ages, the area around the Lysefjord was a shallow mountain valley that had been created as rivers and creeks eroded the landscape. Through the many Ice Ages, which spanned a period of 1-2 million years, moving glaciers carved into the landscape, reforming it along the way. Toward the end of the last Ice Age (10,000 years ago), as the glaciers retreated, debris was pushed downward and outward along the valley while the sea-level simultaneously began to rise. Over time, the debris accumulated into massive piles and walls, known as moraines. The seawater eventually broke over/through the valley's end moraine, causing it to flood, at which point the fjord was formed. Though the floor of the Lysefjord is 457 meters below sea-level at its deepest point, the end moraine at the mouth of the fjord resulted in a depth of just 13 meters. Without the glaciers, which had served as a stabilizing force, the Lysefjord's surrounding mountains became unstable. Successive cold winters caused frost damage to the granite bedrock, which eventually cracked. Once loose, whole sections of the mountainsides broke away, causing vast quantities of rock to tumble into the fjord below. The **Preikestolen** cliffside was formed when three massive cracks gave way, leaving it in its current form. Pictured below is a similar cliff-face called, "**The Trolltunga**", found nearby. This hike was a full day hike from the Skjeggedal Parking Lot.

Once back in Stavanger, I took a ferry to Bergen and then rented a car to explore the **Hardanger Fjord** region.



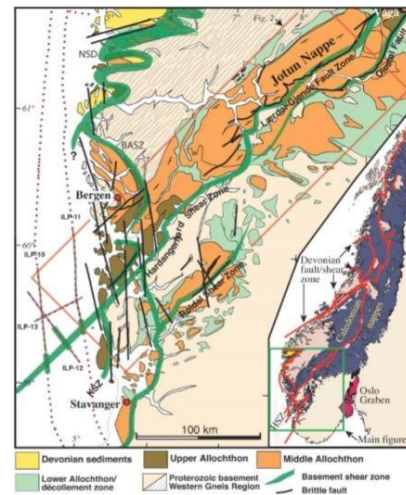
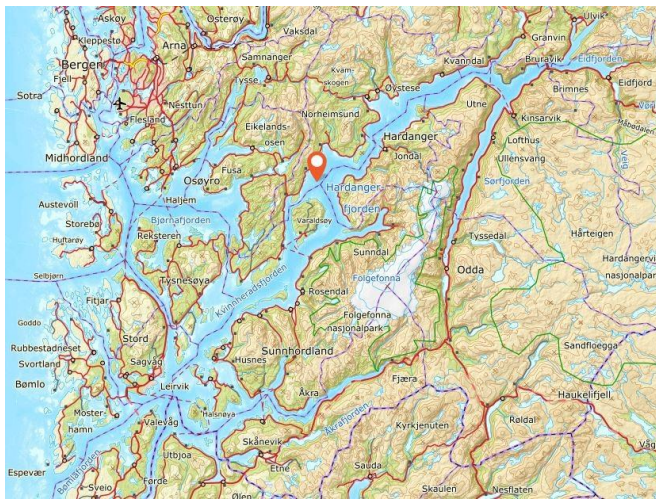
Norway has more than its fair share of highly impressive waterfalls, or fossene, as they are known locally. There's the dramatic but stately **Langfossen** (below left), the wild tumble of **Latefossen** (below right) and the magnificent, pastoral elegance of **Voringsfossen** below the Fossili Hotel. (All near Bergen, Norway facing the **Hardanger Fjord**).







During the Caledonian mountain-building and later, along what is now the **Hardangerfjord**, the earth's crust probably collapsed from top to bottom along the Hardangerfjord Shear Zone, a plane that slopes toward the northwest. On the northwest side of this zone, the ground sank down several kilometers.



The geological map picture of Hordaland reflects this movement. On the Folgefonna Peninsula the Precambrian basement was carried all the way to the top, and is even found on tops that are over 1500 meters high. On the northwest side of the **Hardangerfjord**, however, the basement has most places been buried deep under the Cambro-Silurian phyllite and on top of this by the thrust sheet during the Caledonian mountain building event.

On my way back to Bergen, I had to swing north into Lillehammer and continue towards Sweden. There I visited the **Njupeskar waterfall** (pictured below left) and **Mount Sonfjallet**, (pictured below right).

The gently rounded peak of **Mount sonfjallet** towers 1,278 meters above pine forests in the Swedish province of Jarjedalen. This majestic peak gives its name to the national park that surrounds it. The area was declared a park to protect the mountain's slopes.



**Njupeskar**, Sweden's highest waterfall plunges 125 meters in a gleaming torrent of white foam between jagged walls of black granite rock, surrounded by pristine forests of spruce and pine. **Njupeskar Waterfall** is located in Fulufjallet, north of Dalarna. Dalarna is considered the most typical of Sweden's 24 provinces, with its forests, lakes, mountains, and red-painted wooden cottages and farmhouses. I found **Njupeskar waterfall**, hiking 2 km north from Morkret, Sweden.

From Njupeskar, I drove north toward the another Swedish waterfall named **Tannforsen**.



**Tannforsen**, in the northern province of Jamtland, is reckoned to be Sweden's largest free-flowing waterfall. The waters of **Tannforsen** fall 38 meters across a 60 meter-wide bed of stepped rock, dating back millions of years.

From **Tannforsen**, I drove east on my trek towards the coast and towards a town called Molde, Norway. There I was able to visit an amazing piece of highway named **Atlanterhavsvein**.



The Atlantic Road, known as **Atlanterhavsveien**, (pictured above), is just about the most scenic route one could imagine. The curvy road dips and arches over the brutal waves of the Norwegian Sea that often crash over the pavement during storms. This 8.3 Km segment of County Road 64, consists of several causeways, seven bridges, and four viewpoints to take in the scenic views.

Just south of the **Atlanterhavsveien**, I had the opportunity to drive the **Trollstigen mountain road**, after staying the night in Molde, Norway. Tucked deep into the mountains off the western coast of Norway, the **Trollstigen Mountain Road**, (pictured below left), is one of Norway's most dramatic attractions. Dangerous conditions here include the incline, narrow driving space, and the poor traction and visibility that come with rain and fog. It's one of the famous scenic drives in Norway. The route is known for its 11 hair-raising hairpin turns and steep, 9% gradient. Yet despite the dangers of the one-lane road. The historic **Trollstigen road**, was opened in 1936, and in 2005 the **Geirangerfjord** area was included on UNESCO's World Heritage List. According to Norwegian folk legend, trolls roam through the mountains of **Trollstigen** every night, but change to stone when they are hit by sunlight each morning, (pictured below right). Clouded in a veil of mist, their stone bodies create an unbelievable mass of cliffs and winding beauty that mesmerize.





As mentioned above, just up the road from **Trollstigen** is the famous **Geirangerfjord**. Among the most famous and beautiful of the fjords is **Geirangerfjord**, located near the coastal town of Ålesund, (Pictured below left). During the last ice age, much of northern Europe was glaciated; covered by a large ice sheet known as the Fennoscandian Ice Sheet, which extended from Norway to the Ural Mountains and as far south as the UK. The movement of glaciers during the ice age is what formed the fantastic fjords that cut through Norway's coastline today. Abrasion of the bedrock by ice and other material carried by glaciers cut a deep, steeply sided channel into the ground below. When the glaciers retreated, at the end of the last ice age, the long U-shaped channels they carved, filled with meltwater and connected the inlets with the ocean and creating the fjords like **Geirangerfjord**, (pictured below right).



After my visit to the **Trollstigen** and **Geirangerfjord**, I stayed the night in a little town called Stryn. There, they were celebrating the Summer Solstice by building a giant fire for their gods, (pictured below left). The next day I visited beautiful lake up a nearby canyon called **Lovatnet Lake**, (pictured below right). Note how green the water is. **Lovatnet lake** is green because it

contains clay particles and rock dust, carved out by glaciers and swept along by rivers. The glaciers are continuously crushing up rocks and stones. When the glacial water reaches the lakes and fjords, it looks green, especially when the sun shines.



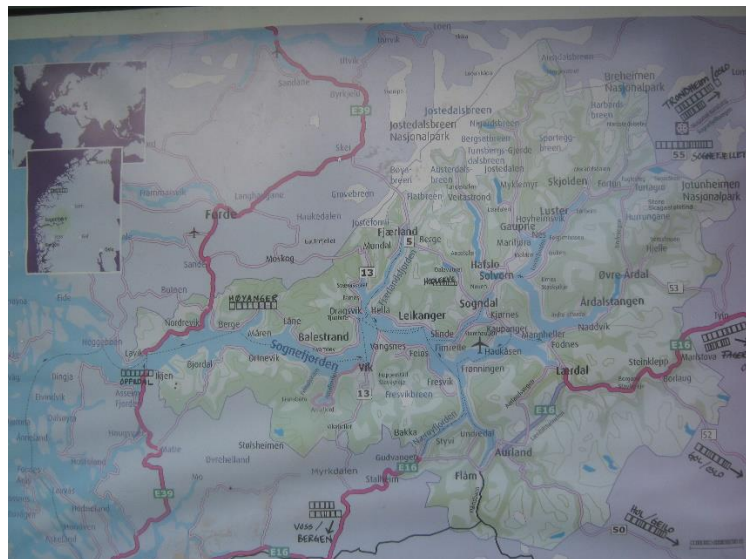
That day, I continued south to visit the **Briksdalsbreen** portion of the **Jostedalbreen**. **Briksdalsbreen**, (pictured below right), is a glacier arm of **Jostedalbreen**, and is set in Briksdal Valley, at the end of Oldedalen Valley, in Stryn in Sogn og Fjordane County. This famous glacier arm lies in beautiful surroundings between high peaks and roaring waterfalls, dropping 1200 meters into the narrow Briksdal valley below. It is a spectacular sight.





**Jostedalsbreen**, (pictured above left), is the largest glacier on the European mainland. The main glacier rests on a mountain plateau west of the Jostedal valley, hence the name. The glacier ice covers a total area of about 500 km<sup>2</sup>, while the national park is more than 1300 km<sup>2</sup>. **Jostedalsbreen** is a temperate glacier such that it is at melting point throughout the year, from its surface to its base. The glacier is not frozen to the bedrock but flows along the slopes and through the valleys like a river, albeit at very low speed from 1 cm/day up to 100 cm/day (3 feet per day). Flow is highest at surface and middle causing the ice to crack and break up. Chunks of ice regularly falls from the edge or front of the glacier, a process known as *ice calving*. An additional glacier arm that I visited that day was the **Boyabreen**, (pictured below left). The meltwater from this giant glacier partly drains into Fjaerlandsfjord, a tributary of Sognefjord, (pictured below right).

Rising almost vertically from the water's edge, the mountains that line Sognefjord dwarf any large ship entering this spectacular arm of the sea. It is truly awesome. Great walls of granite, probably 2,000 million years old, rise up to 900 meters above the inlet. Waterfall, like thin ribbons, cascade over the dark rocks. The fjord is the longest in Norway, extending inland for 184 km. at its widest point it is 5 km and its waters are a staggering 1,200 m deep. The fjord was formed when glaciers carved into the underlying rock bed during the ice age, creating the sheer granite walls on view today. As this ice slowly melted, the sea rose, and the valley was drowned.



The next day, I crossed the **Sognefjord** to visit the **Urnes Stave Church**. The **Urnes Stave Church**, (pictured below left) is the oldest of Norway's stave churches, and is included on UNESCO's World Heritage List. It was built around 1130 AD, but the distinctive carvings on the north portal are from an even older church. Picture below right is a nice view of the **Sognefjord** at a viewing platform called the Stegastein.



From Sognefjord to Bergen, I stayed the night in Flam, Norway. Nearby, I walked to the **Kjofossen**. For sheer majestic power, **Kjofossen** is unbeatable (pictured below right). It hurtles 93 meters down a cliff face, with a roar that can be heard for miles around, spray leaping high in the air to form prisms in the bright sunlight.

Driving back from Flam to Bergen over the mountain-plateau tops gave magnificent views such as the one I found pictured below on the left. I later, turned in my car rental in Bergen, Norway and flew to Bodo, Norway.



Bergen, (pictured below) is today the second-largest city in the country. By far the most iconic sight to greet any visitor to Bergen is the colorful facade of **Bryggen**, the old Hanseatic wharf that was first established in the 14th century. It has been, and still is, a place of both cultural and economic significance. The picturesque wooden structures, rebuilt following a fire in 1702, later became recognized as a vital part of Bergen's cultural heritage, and also the world's, as a



UNESCO World Heritage site. The wharf today, includes shops, restaurants and cafés and is an emblematic and natural focal point for locals and visitors alike.



Once in Bodo, Norway; I booked arrangements to take a boat out to the **Saltstraumen Maelstrom**. **Saltstraumen**, (pictured below left), has one of the strongest tidal currents in the world. Up to 400 million cubic meters of seawater forces its way through a 3-kilometer long and 150-metre wide strait every six hours. Vortices known as whirlpools or maelstroms up to 10 meters in diameter and 5 meters in depth are formed when the current is at its strongest. **Saltstraumen** has existed for about two to three thousand years. Before that, the area was different due to post-glacial rebound. The current is created when the tide tries to fill Skjerstad Fjord. The height difference between the sea level and the fjord inside can be up to 1 meter. When the current turns, there is a period when the strait is navigable. Even though the image I showing below doesn't express it, the adventure was incredible. I took mostly videos of this amazing wonder.

There were some rock faces that were simply spectacular, including this rock face pictured below right in the **Saltstraumen**. These fascinating folds have formed under distinct circumstances. About 490-390 million years ago the Caledonian Orogeny happened due to the continents of Laurentica, Avalonia and Baltica colliding. Here, the collision involved Laurentica and Baltica only. The collision created an area of metamorphic rock called the Caledonian fold belt. The rock exposed in the picture below right, is most likely gneiss like most rock surfaces in this area of Norway. The metamorphosis of these sediments were under high temperatures and

high pressure (amphibolite). The prominent layering was then caused by erosion of layers that were softer. This is most likely due to dissolution of more soluble Marble-rich layers.



The next day, I took a ferry to the **Lofoten archipelago** near Moskenes. The **Lofoten archipelago**, located north of the Arctic Circle, offered breathtaking, unforgettable scenery, impressive alpine mountain peaks, Arctic fjords and tiny fishing settlements. The picturesque harbors of Tind overlooks “Å”, and lures artists, inspired by the unique light in **Lofoten**, (pictured below left). **Lofoten** is comprised of the youngest and the oldest types of rock we know. The latter are so-called primeval rocks and are among the oldest in the world, being the remnants of a once enormous 3 billion year old plateau. The island of Moskenesøy is the only one of the **Lofotens** that can boast of being composed in part of this oldest, primeval ground. From the shore, these mountains tower up, steep and sheer, towards the sky. On top, however, they become gentle, undulating, and flat. The "younger" mountains have sharp peaks, sharp ridges and are often referred to as an "alpine landscape". The mountains of **Lofoten** are so high that scientists believe they were not covered by ice during the last Ice Age which took place about 18,000 – 20,000 years ago.

Overall, **Lofoten** protrudes from the mainland and into the sea like an outstretched arm. The location of the islands catches the eye, and they are therefore displayed on many old and ancient maps. Such an armlike position catches indeed most things, particularly gale force winds, storms and rain ..., but the most important thing this arm embraces is the invisible, life-giving Gulf Stream. The Gulf Stream strokes intimately past the Lofoten Islands, creating mild winters, both at sea and on land. **Lofoten** is one of the best places in the world for producing stockfish. The further west you go in **Lofoten**, the better – in Tind and “Å”, conditions are particularly favourable. Visiting the **Lofoten Islands** in the Summer is an experience for both the nose and the eyes, when knolls and hilltops are covered with fully laden stockfish racks, (pictured below right).





Eventually, I took a bus to Narvik, Norway, where I rented a car and drove to **Senja Island**. The nature on the island of **Senja** is like a cross-section of Norwegian nature – a Norway in miniature. On the “inner coast” and in the south, I discovered a gentle landscape with marshland, pine forests and forested hillsides. When I crossed Senja towards the west and north, the landscape rose through mountain birch forests, crossing tree-less mountains and barren, high mountains before it dropped suddenly down toward the open sea of the “outer coast”. Pictured below is of the **Stenfjord** looking **northwest** and then looking **northeast** towards the “**Devil’s Teeth**”.



Once in Narvik, I made arrangements to take a train to Abisko and begin a 5-day hiking trek on the King’s Trail or “**Kungsleden**” in Sweden. Pictured below left is the trailhead for the **Kungsleden** and the entrance to **Lapland**. **The lapp gate**, Sweden’s most distinctive natural landmark, lies in the extreme north, 200 km above the Arctic Circle. **The Lapp Gate** is a startling U-shaped valley between two of Sweden’s tallest mountains, Tjuonatjakka and Nissotjarro, (pictured below right). This perfectly symmetrical valley, from a distance looking like a giant hole cut through the mountain range, was shaped by glaciation. **The Lapp Gate** is known as the gateway to Swedish **Lapland**, an enchanting place of wild tundra, reindeer, and the native Lapp people, “**the Sami**”. The **Kungsleden** is a 450 km hiking trail that begins at **Abisko National Park**, and travel south to Hemavan. Hiking the entire route could take a month and

immerses the walker in some of the finest wilderness in Europe with vast open stretches of tundra and forest. I only hiked 5 days in and out of the wilderness.



**Lapland** in northern Sweden is home to a number of spectacular national parks, the most scenic of these being **Abisko National Park**. Framed by mountain ranges in the south and west, and the waters of Tornetrask Lake in the north, the low-lying valley of **Abisko National Park** is a wonder to behold. The 24-hour arctic-light dances over the glistening Abiskojokka River, (pictured below left), which runs through the park, and deep canyons with steep cliff walls that reveal the area's violent geological past. I made it as far as the **Alesjaure Hut**, (pictured below right) and the **Tjaktja Point**. You can see that the weather turned to snow on me before I got my destination, the **Tjaktia High Point**. Again note, that I was north of the Arctic Circle and the weather changed daily with the 24 hours of light in July.



After returning to Narvik, Norway I continue north to the **Felszeichnungen**, (rock carvings) near Alta, Norway. The rock carvings in Alta, (pictured below), bears the traces of a settlement dating from around 4,200 to 500 BC. The rock art constitutes the most important piece of evidence documenting the existence of human activity on the fringes of the Far North in prehistoric times – hence its status as a UNESCO world heritage site.





From Alta, I continued driving North to **Nordkapp**. Raindeer, (pictured below left), in the road became an issue. **Nordkapp**, (pictured below right) is a 307 m high cliff rising above the Arctic Ocean north of Norway. It is the northernmost point in Europe reachable by car, and the northernmost place connected with the international road network. The Latitude and Longitude of **Nordkapp** is 71 degrees North and 26 degrees West respectively. However, viewing the midnight sun on Norway's north Cape is an unforgettable experience—where the sun sinks majestically toward the horizon but then stops, hanging in the sky; a giant red ball over a pristine, golden sea. Then it begins to rise again.



After **Nordkapp**, I turned the car southeast and headed towards Finland. My destination was a place called **Lake Inari**. The Finnish **Lapland** is a place of lakes, and the largest is the deep blue-Lake **Inari**, (pictured below), near the Russian border. Almost a small sea rather than a lake, its shores are jagged, indented with hundreds of inlets, and over 3,000 tree-covered islands that are scattered over it's waters. The lake covers an area of 1,300 square kilometers and its sides fall steeply to the murky depths below. The lake is fed by the Ivalajoke river and empties into the Barents Sea through the Paatsjoki river.



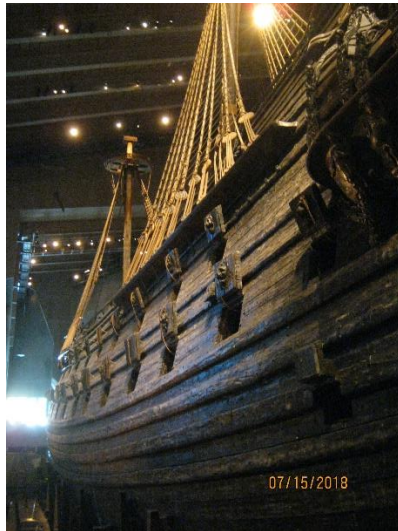
After visiting **Lake Inari**, I looped through Northern Finland, and headed west again, towards Narvik, Norway to return the car-rental. At that point, I booked a flight to Stockholm, Sweden.

In Stockholm, I immediately booked a ferry to **Gotland**, just south of Stockholm. **Gotland** is a small island in the Baltic sea, off the southeast coast of Sweden. It is home to the **raukar**, a naturally formed limestone pillars that resemble human figures. On misty days they loom as if from the Viking sagas, staring seaward with expressions of petrified astonishment. The most impressive **raukar** are to be found between Digerhuvud and Lauterhorn of the coast of **Faro**, (pictured below left), to the north of the main island. **Faro** is the Burial-Site to legendary Swedish film director Ingmar Bergman and his wife Ingrid, (picture below right).





After returning to Stockholm, I visited the **Fram Museum**, (A museum that tells the story of Norwegian polar explorations), and the **Vasa Museum**, (pictured below left). The **Vasa** is the only preserved seventeenth-century ship in the world and a unique art treasure. More than 95 percent of the ship is original, and it is decorated with hundreds of carved sculptures.



The 69 meter-long warship **Vasa** sank on its maiden voyage in the middle of Stockholm in 1628 and was salvaged 333 years later in 1961. For nearly half a century the ship has been slowly, deliberately and painstakingly restored to a state approaching its original glory. The three masts on the roof outside the specially built museum show the height of the ship's original masts.

Additionally, I visited the famous **Nobel Museum**, (pictured above right). The **Nobel Museum** contained all the essential information about the most prestigious prize in the world, Alfred Nobel, and the Nobel Laureates.



Before I came home from my summer trek, I decided to visit the **Stockholm Archipelago**, (pictured above). The 24,000 islands, islets, holms, and skerries of the **Stockholm archipelago**--are paradise in summer, described by Swedish author and dramatist August Strindberg as a "basket of blossoms on ocean's wave." The archipelago was created by the movement of ice, carving through what was originally an inland mountain range, to leave outcrops of rock. As the ice retreated, it polished the rock, giving the islands smooth, rounded slopes to the north, but leaving steep, sharp, angular slopes to the south. The archipelago begins in the heart of Stockholm, with the island of **Skeppsholmen**. The islands closest to the mainland are bigger than those farther out, and are separated by stretches of water that the Swedes call **fjardar**.

In October, Becky and I went on a road trip with our friends Mike and Lisa Stevens to the **Olympic Peninsula** in Washington State. Our main goal was to visit **Olympic National Park**. **Olympic National Park** is possibly the national park system's most diverse national parks, including snowcapped peaks, temperate rain forests, and windswept ocean coastal areas. The park is located on the **Olympic Peninsula** in the extreme northwest corner of Washington state, surrounded by the Strait of Juan De Fuca on the north, the Pacific Ocean on the west, and the Puget Sound to the east.

The **Olympic Mountains** are striking and are among the most beautiful mountain ranges in any American national park. The range is visible throughout the Puget Sound area. But some of



the most beautiful views of the **Olympic Mountains** are found from the vantage point of **Hurricane Ridge**, (pictured below with Becky). The line of mountains running in a north south direction and visible from **Hurricane Ridge** is the **Bailey Range**. This range actually sits east of, and from the perspective of **Hurricane Ridge**, in front of, **Mt. Olympus**. The **Bailey Range** form the backbone of the Olympics. The **Bailey Range** resemble the teeth of a saw blade. The characteristic "folds" of the range, visible below, are formed by the erosive action of melting snow and dripping glaciers. The mountains of the Olympic ranges, specifically the **Bailey Range**, pull moisture from the air which flows in from the Pacific. This creates a rain-shadow which results in an extraordinarily wet-climate on the west side and a dry one on the east side. The climate west of the crest of these mountains is the driest on the northern Pacific Coast.



The next day, we visited the **Sol Duc** area. The name "**Sol Duc**" means "sparkling water", a reference in all probability to the beautiful river which flows through the area. The **Sol Duc River**, (pictured below) arises in the Olympic mountains, flows to the north and then to the west. The **Sol Duc River** is "cobbled", having a very graveled bed. The river is known for the runs of spawning Coho-salmon and steelhead in the gravel of the river bed. The **Sol Duc River** flows through a canyon over a bank at the **Sol Duc falls**. Becky and Mike are posing on the bridge behind the falls in the picture below. Mist rises from the river and the falls over the banks covered with heavy vegetation. The Trail to the falls, passes through a beautiful ancient forest that started at the Sol Duc Resort and hot springs.



The next day we visited the **Dungeness Spit**. The **Dungeness Spit** is a remarkable thin stretch of sand and gravel beach extending out into the Strait of Juan de Fuca over 10 Km from the main coast. A big chunk of sediment comes from the high eroding bluffs to the southwest of the spit. These bluffs are exposed to fairly large waves coming into the open water of the Strait of Juan de Fuca. The **Dungeness Spit** is the longest spit in the United States. The spit is even more complicated by the presence of another source of sediment from the southeast and from sediment inputs from the Dungeness River, as well as periodic waves generated by south winds blowing onto the backside of the spit. Beyond the lighthouse at the end, the spit is a no-entry wild life preserve as critical habitat for many bird species.





There are 4 major rivers which arise in the **Olympic Mountains** and flow through valleys into the Pacific Ocean. One of these rivers is the **Hoh**. The **Hoh River**, flows into the Pacific in the southern coastal section of the park. The valley through which the **Hoh** flows, was cut by glaciers. It is U-shaped, unlike stream-cut valley which are more V-shaped. The rivers of the park, including the **Hoh**, are fairly young geologically speaking. They have also been subject to floods as well as the effects of large landslides. The rivers of the western section of the park are prime habitat for steelhead, which swim up those waters. The rivers in the valleys, where the rain-forests grow, serve as the major arteries of the forest community. The temperate **Hoh rain-forest**, (pictured below), is one of the most spectacular of the various varieties of forests found in the northern hemisphere. It is also the most productive, in terms of amount of biomass per acre, of any on earth. The rain-forest features Sitka spruce, western hemlock, western red cedar, and Douglas fir. The signature characteristics of the temperate rain-forest are the very large sizes of trees, and the presence of a lot of mosses, lichens, liverworts, and multilayered canopies. A necessary component of the lush vegetation is moisture. This is produced in great abundance by precipitation on the west side of the **Olympic Range**. Moisture laden air flowing in from the Pacific Ocean meeting the mountains produces more than 4 meters of precipitation annually in these valleys. The **Hoh River Valley** receives 305 - 457 cm of rain per year, and the amount of rainfall may reach as much as 457 cm. The lush rain-forest also requires a year round supply of moisture, and although there is not much rain in the summer, summer fog supplies the necessary moisture. This temperate rain forest requires a mild coastal climate in addition to rain and fog. The valleys which contain the rain-forests

happen to be aligned with the prevailing, southwest flowing winter storm-track. This allows sizable amounts of moisture to be funneled into the upper levels of the valleys. Below, Becky and I are posing within the **Hoh rain-forest** in October.



On that same day, we visited **Olympic National Park's** coastal areas, where it contains the longest strip of coastal wilderness in the lower 48 states. The coastal strip of **Olympic National Park** preserves some of the most primitive coastline found in the continental United States. Most of the beaches are wilderness with no significant development of any kind. In particular, many of the northern beaches are very remote and can only be reached via a fairly long hike. Located in the southern section of the park's coastal area, **Ruby Beach** is one of the most scenic areas of the park. The area includes a broad beach, a beautiful stream, and a rugged, rocky coastline. There are several large sea stacks at **Ruby Beach** (pictured below with Becky, Lisa and Mike). These rocky islands are actually former headlands which have been separated from the mainland by the effects of erosion. **Ruby Beach** is known for the pinkish color of the sands. This is caused by the presence a small amounts of garnet in the sand. The largest island, or sea stack, in the background is **Abbey Island**. These sea stacks found along many portions of the Olympic coast provide nesting habitats for coastal birds. They are also utilized by both resident and migratory sea mammals.





On our way back home, Becky and I drove through the Tacoma, Washington to pick up my father's mounted fish. A year previously, while in Washington, Becky and I left his world-record fish-mount with a fish-artist, named David Campbell, to refurbish. Pictured below are the 1951 images taken just after the event.

Over the years, the mounted fish had fallen in extreme disrepair. It was originally mounted with its original skin and the skin was deteriorating. Becky and I decided that to save the fish we had to clean and refurbish it like natural-history museums do world-wide. After researching this, we found that one of the World's best museum fish refurbisher lives in Tacoma, Washington. He was expensive, but worth it. We're planning on presenting the fish in my home-town Beaver, Utah at the Fishlake Forest Service main-office.



Patrick M. LINDSAY caught this German Brown  
 Date: August 8th 1951 Length: 35" Inches, Girth: 24" Inches, Width: 9" inches,  
 Weight: 20 3/4 lbs pounds dressed. (Gutted). The Guts weight 5 lbs. pounds.  
 The German Brown was caught by Patrick M. LINDSAY, he caught it with a Fly rod and a South Bend Automatic Reel.  
 The German Brown was caught at the Little Reservoir, Fishlake National Forest, Beaver County, Utah.  
 This fish was Continantal record for the German Brown species, and probably a worlds record. a 19 pound Brown was recorded  
 in Scotland before this time.



Patrick M. LINDSAY caught this German Brown  
 Left-to-Right: Grandpa Harold GALE holding Helen LINDSAY's hands.  
 Grandpa Charles M. LINDSAY holding the German Brown.  
 Patrick M. LINDSAY standing on Charles left side.  
 Helen is Pat LINDSAY's daughter



**Before...**



**After...**

