# **ICELAND AUGUST 1964 NOTES**

## (June to August 2019) MV Gullfoss

**MV** *Gullfoss* was a ferry operating between <u>Iceland</u>, <u>Denmark</u>, and <u>Scotland</u> from 1950 to 1972. She replaced another *Gullfoss*. They were named after the much-visited <u>Gullfoss</u> waterfall.

In 1939 <u>Eimskip</u> planned to replace the 1915 *Gullfoss*, but <u>World War II</u> intervened. Some days after launching, *Gullfoss* suffered a <u>dust explosion</u>, which killed four shipyard workers and injured two. On 14 May 1950 *Gullfoss* made her maiden voyage from <u>Copenhagen</u>, Denmark, carrying 164 passengers, arriving in <u>Reykjavík</u>, Iceland, on Saturday, 20 May, to a ministerial welcome.

During the 1950s and 1960s *Gullfoss* ran fortnightly in summer on the Copenhagen-<u>Edinburgh/Leith</u>-Reykjavik route and three times weekly via <u>Hamburg</u>, <u>West Germany</u>, in winter. In winter she also ran cruises. In 1950 and 1951, <u>Compagnie Générale</u> <u>Transatlantique</u> chartered her for service from <u>Bordeaux</u>, <u>France</u>, to <u>Casablanca</u>, <u>French</u> <u>Morocco</u>. In 1953 she was in the <u>Mediterranean</u> and in 1967 cruised from Iceland to the <u>Azores</u>, <u>Madeira</u>, Casablanca, and <u>Lisbon</u>. Several cruises went to <u>Amsterdam</u> and <u>London</u> and around Iceland. In 1963, *Gullfoss* was damaged by fire whilst being maintained at her builder's yard and in 1966 she collided with MV *Malmöhus* near Copenhagen.

By the early 1970s *Gullfoss* operated only during the summer, and she was withdrawn from service in 1972 due to airline competition. She evacuated <u>Heimaey</u> in the <u>Vestmannaeyjar</u> (Westman Islands) in January 1973 when <u>Eldfell</u> volcano erupted.

In November 1973 she was converted to carry 1,100 pilgrims and renamed *Mecca*. In January 1974 she arrived in <u>Jeddah</u>. <u>Saudi Arabia</u>, and operated the 160 nmi (300 km) route between Jeddah (the port for <u>Mecca</u>, 86 km (53 mi) away), <u>Hodeidah</u>, <u>Yemen</u>, and <u>Port Sudan</u>, <u>Egypt</u>, for Orri Navigation until she caught fire in the <u>Red Sea</u> on 19 December 1976, drifted onto a reef, and sank the next day.



## Dyrhólaey

**Dyrhólaey** (<u>Icelandic</u> for *door hill island*), formerly known by seamen as **Cape Portland**, is a small <u>promonotory</u> located on the south coast of <u>Iceland</u>, not far from the village <u>Vík</u>. It was formerly an island of <u>volcanic</u> origin, which is also known by the Icelandic word *eyja* meaning *island*. The peninsula has an elevation of 120 metres (390 ft), and the <u>Dyrhólaey Lighthouse</u> sits at the top of the formation facing the sea.

The view from Dyrhólaey is broad: To the north is to be seen the big <u>glacier</u> <u>Mýrdalsjökull</u>. To the east, the black <u>lava</u> columns of the <u>Reynisdrangar</u> come out of the sea, and to the west the whole coastline in the direction of <u>Selfoss</u> is visible – depending on weather conditions. In front of the peninsula, there is a gigantic black arch of lava standing in the sea, which gave the peninsula its name (meaning: *door hill island*).

In the summertime, many Atlantic puffins can be found nesting on the cliff faces of Dyrhólaey.



## Surtsey

**Surtsey** ("<u>Surtr</u>'s island" in <u>Icelandic</u>, Icelandic pronunciation: <u>['syrtsei]</u>) is a <u>volcanic</u> island located in the <u>Vestmannaeyiar archipelago</u> off the southern coast of <u>Iceland</u>. At 63.303°N 20.605°W<u>Coordinates</u>: 63.303°N 20.605°W, Surtsey is the <u>southernmost point of Iceland</u>. It was formed in a <u>volcanic eruption</u> which began 130 metres (430 feet) below sea level, and reached the surface on 14 November 1963. The eruption lasted until 5 June 1967, when the island reached its maximum size of 2.7 km<sup>2</sup> (1.0 sq mi). Since then, wave erosion has caused the island to steadily diminish in size: as of 2012, its surface area was 1.3 km<sup>2</sup> (0.50 sq mi). The most recent survey (2007) shows the island's maximum elevation at 155 m (509 ft) above sea level.

The new island was named after <u>Surtr</u>, a fire <u>jötunn</u> or giant from <u>Norse mythology</u>. It was intensively studied by <u>volcanologists</u> during its eruption, and afterwards by <u>botanists</u> and other <u>biologists</u> as life forms gradually colonised the originally barren island. The undersea vents that produced Surtsey are part of the <u>Vestmannaeyjar</u> submarine volcanic system, part of the fissure of the sea floor called the <u>Mid-Atlantic Ridge</u>. Vestmannaeyjar also produced the famous eruption of <u>Eldfell</u> on the island of <u>Heimaey</u> in 1973. The eruption that created Surtsey also created a few other small islands along this volcanic chain, such as <u>Jólnir</u> and other unnamed peaks. Most of these eroded away fairly quickly. It is estimated that Surtsey will remain above sea level for another 100 years.

The eruption was unexpected, and almost certainly began some days before it became apparent at the surface. The sea floor at the eruption site is 130 metres (430 feet) below sea level, and at this depth volcanic emissions and explosions would be suppressed, quenched and dissipated by the water pressure and density. Gradually, as repeated flows built up a mound of material that approached sea level, the explosions could no longer be contained, and activity broke the surface.

The first noticeable indications of volcanic activity were recorded at the seismic station in <u>Kirkjubæjarklaustur</u>, Iceland from 6 to 8 November, which detected weak tremors emanating from an <u>epicentre</u>approximately west-south-west at a distance of 140 km (87 mi), the location of Surtsey. Another station in <u>Reykjavík</u> recorded even weaker tremors for ten hours on 12 November at an undetermined location, when seismic activity ceased until 21 November. That same day, people in the coastal town of <u>Vík</u> 80 km (50 mi) away noticed a smell of <u>hydrogen</u> <u>sulphide</u>. On 13 November, a fishing vessel in search of herring, equipped with sensitive thermometers, noted sea temperatures 3.2 km (2.0 mi) SW of the eruption centre were 2.4 °C (4.3 °F) higher than surrounding waters.

#### Eruption at the surface

At 07:15 <u>UTC</u> on 14 November 1963, the cook of *Ísleifur II*, a trawler sailing these same waters, spotted a rising column of dark smoke southwest of the boat. The captain thought it might have been a boat on fire, and ordered his crew to investigate. Instead, they encountered explosive eruptions giving off black columns of ash, indicating that a volcanic eruption had begun to penetrate the surface of the sea. By 11:00 the same day, the <u>eruption column</u> had reached several kilometres in height. At first the eruptions took place at three separate vents along a northeast by southwest trending <u>fissure</u>, but by the afternoon the separate eruption columns had merged into one along the erupting fissure. Over the next week, explosions were continuous, and after just a few days the new island, formed mainly of <u>scoria</u>, measured over 500 metres (1,600 feet) in length and had reached a height of 45 metres (148 feet).

As the eruptions continued, they became concentrated at one vent along the fissure and began to build the island into a more circular shape. By 24 November, the island measured about 900 by 650 metres (2,950 by 2,130 ft). The violent explosions caused by the meeting of <u>lava</u> and sea water meant that the island consisted of a loose pile of volcanic rock (<u>scoria</u>), which was eroded rapidly by North <u>Atlantic</u> storms during the winter. However, eruptions more than kept pace with wave erosion, and by February 1964, the island had a maximum diameter of over 1,300 metres (4,300 feet).

The explosive <u>phreatomagmatic</u> eruptions caused by the easy access of water to the erupting vents threw rocks up to a kilometre (0.6 mi) away from the island, and sent <u>ash</u> clouds as high as 10 km (6.2 mi) up into the <u>atmosphere</u>. The loose pile of unconsolidated <u>tephra</u> would quickly have been washed away had the supply of fresh magma dwindled, and large clouds of dust were often seen blowing away from the island during this stage of the eruption.

The new island was named after the fire jötunn <u>Surtur</u> from <u>Norse mythology</u> (*Surts* is the <u>genitive case</u> of *Surtur*, plus <u>-ey</u>, *island*). Three French journalists representing the magazine <u>Paris Match</u> notably landed there on 6 December 1963, staying for about 15 minutes before violent explosions encouraged them to leave. The journalists jokingly claimed French <u>sovereignty</u> over the island, but Iceland quickly asserted that the new island belonged to it.

#### Permanent island

By early 1964, though, the continuing eruptions had built the island to such a size that sea water could no longer easily reach the vents, and the volcanic activity became much less <u>explosive</u>. Instead, <u>lava fountains</u> and <u>flows</u> became the main form of activity. These resulted in a hard cap of extremely erosion-resistant rock being laid down on top of much of the loose volcanic pile, which prevented the island from being washed away rapidly. Effusive eruptions continued until 1965, by which time the island had a surface area of 2.5 km<sup>2</sup> (0.97 sq mi).

On 28 December 1963, <u>submarine activity</u> to the northeast of Surtsey caused the formation of a ridge 100 m (330 ft) high on the sea floor. This <u>seamount</u> was named <u>Surtla</u>, but never reached sea level. Eruptions at Surtla ended on 6 January 1964, and it has since been eroded from its minimum depth of 23 to 47 m (75 to 154 ft) below sea level.

In 1965, the activity on the main island diminished, but at the end of May that year an eruption began at a vent 0.6 km (0.37 mi) off the northern shore. By 28 May, an island had appeared, and was named <u>Syrtlingur</u> (Little Surtsey). The new island was washed away during early June, but reappeared on 14 June. Eruptions at Syrtlingur were much smaller in scale than those that had built Surtsey, with the average rate of emission of volcanic materials being about a tenth of the rate at the main vent. Activity was short-lived, continuing until the beginning of October 1965, by which time the islet had an area of 0.15 km<sup>2</sup> (0.058 sq mi). Once the eruptions had ceased, wave erosion rapidly wore the island away, and it disappeared beneath the waves on 24 October.

During December 1965, more submarine activity occurred 0.9 km (0.56 mi) southwest of Surtsey, and another island was formed. It was named <u>Jólnir</u>, and over the following eight months it appeared and disappeared several times, as wave erosion and volcanic activity alternated in dominance. Activity at Jólnir was much weaker than the activity at the main vent, and even weaker than that seen at Syrtlingur, but the island eventually grew to a maximum size of 70 m (230 ft) in height, covering an area of 0.3 km<sup>2</sup> (0.12 sq mi), during July and early August 1966. Like Syrtlingur, though, after activity ceased on 8 August 1966, it was rapidly eroded, and dropped below sea level during October 1966.

Effusive eruptions on the main island returned on 19 August 1966, with fresh lava flows giving it further resistance to erosion. The eruption rate diminished steadily, though, and on 5 June 1967, the eruption ended. The volcano has been dormant ever since. The total volume of lava emitted during the three-and-a-half-year eruption was about one cubic kilometre (0.24 cu mi), and the island's highest point was 174 metres (571 feet) above sea level at that time.

Since the end of the eruption, erosion has seen the island diminish in size. A large area on the southeast side has been eroded away completely, while a sand spit called *Norðurtangi* (north point) has grown on the north side of the island. It is estimated that about 0.024 km<sup>3</sup> (0.0058 cu mi) of material has been lost due to erosion—this represents about a quarter of the original above-sea-level volume of the island. Its maximum elevation has diminished to 155 m (509 ft).

## **Recent development**

Following the end of the eruption, scientists established a grid of benchmarks against which they measured the change in the shape of the island. In the 20 years following the end of the eruption,

measurements revealed that the island was steadily subsiding and had lost about one metre in height. The rate of subsidence was initially about 20 cm (8 in) per year but slowed to 1–2 cm (0.39–0.79 in) a year by the 1990s. It had several causes: settling of the loose <u>tephra</u> forming the bulk of the volcano, compaction of sea floor <u>sediments</u> underlying the island, and downward warping of the <u>lithosphere</u> due to the weight of the volcano.

Volcanoes in the Vestmannaeyjar archipelago are typically <u>monogenetic</u>, and so the island is unlikely to be enlarged in the future by further eruptions. The heavy seas around the island have been eroding it ever since the island appeared, and since the end of the eruption almost half of its original area has been lost. The island currently loses about 1.0 hectare (2.5 acres) of its surface area each year.

## Future

This island is unlikely to disappear entirely in the near future. The eroded area consisted mostly of loose <u>tephra</u>, easily washed away. Most of the remaining area is capped by hard lava flows, which are much more resistant to erosion. In addition, complex chemical reactions within the loose tephra within the island have gradually formed highly erosion resistant <u>tuff</u> material, in a process known as <u>palagonitization</u>. On Surtsey this process has happened quite rapidly, due to high temperatures not far below the surface.

Estimates of how long Surtsey will survive are based on the rate of erosion seen up to the present day. Assuming that the current rate does not change, the island will be mostly at or below sea level by 2100. However, the rate of erosion is likely to slow as the tougher core of the island is exposed: an assessment assuming that the rate of erosion will slow exponentially suggests that the island will survive for many centuries.<sup>[13]</sup> An idea of what it will look like in the future is given by the other small islands in the Vestmannaeyjar archipelago, which formed in the same way as Surtsey several thousand years ago, and have eroded away substantially since they were formed.



# Reykjavík

(/'reɪkjəvɪk, -viːk/ RAYK-yə-vik, -veek; lcelandic: ['reiːca viːk] (Isten)) is the capital and largest city of Iceland. It is located in southwestern Iceland, on the southern shore of Faxa Bay. Its latitude is 64°08' N, making it the world's northernmost capital of a sovereign state. With a population of around 128,793 (and 228,231 in the Capital Region), it is the heart of Iceland's cultural, economic and governmental activity, and is a popular tourist destination.

Reykjavík is believed to be the location of the first permanent settlement in Iceland, which, according to <u>Ingólfr Arnarson</u>, was established in AD 874. Until the 19th century, there was no <u>urban development</u> in the city location. The city was founded in 1786 as an official trading town and grew steadily over the following decades, as it transformed into a regional and later <u>national</u> centre of <u>commerce</u>, population, and governmental activities. It is among the cleanest, greenest, and safest cities in the world.



From upper left: Reykjavik from Perlan, rooftops from Hallgrímskirkja, Reykjavik from Hallgrímskirkja, Fríkirkjan, panorama from Perlan



Panorama of Reykjavík seen from Perlan at sunset in summer. As seen in the picture, Reykjavík is mild enough for trees to grow.



Panorama of Reykjavík seen from Perlan with the mountains Akrafjall (middle) and Esja (right) in the background





Reykjavík is located in the southwest of <u>Iceland</u>. The Reykjavík area coastline is characterized by peninsulas, coves, straits, and islands.

During the <u>Ice Age</u> (up to 10,000 years ago) a large glacier covered parts of the city area, reaching as far out as <u>Álftanes</u>. Other parts of the city area were covered by sea water. In the warm periods and at the end of the Ice Age, some hills like Öskjuhlíð were islands. The former sea level is indicated by sediments (with clams) reaching (at Öskjuhlíð, for example) as far as 43 m (141 ft) above the current sea level. The hills of Öskjuhlíð and Skólavörðuholt appear to be the remains of former <u>shield volcanoes</u> which were active during the warm periods of the Ice Age. After the Ice Age, the land rose as the heavy load of the glaciers fell away, and began to look as it does today.

The capital city area continued to be shaped by earthquakes and <u>volcanic eruptions</u>, like the one 4,500 years ago in the mountain range Bláfjöll, when the lava coming down the Elliðaá valley reached the sea at the bay of Elliðavogur.

The largest river to run through Reykjavík is the <u>Elliðaá</u> River, which is non-navigable. It is one of the best <u>salmon</u> fishing rivers in the country. Mount <u>Esja</u>, at 914 m (2,999 ft), is the highest mountain in the vicinity of Reykjavík.

The city of Reykjavík is mostly located on the Seltjarnarnes peninsula, but the suburbs reach far out to the south and east. Reykjavík is a spread-out city: most of its urban area consists of low-density suburbs, and houses are usually widely spaced. The outer residential neighbourhoods are also widely spaced from each other; in between them are the main traffic arteries and a lot of empty space.

## **Early History**

The first permanent settlement in Iceland by <u>Norsemen</u> is believed to have been established at Reykjavík by <u>Ingólfr Arnarson</u> around AD 870; this is described in <u>Landnámabók</u>, or the Book of Settlement. Ingólfur Arnarson is said to have decided the location of his settlement using a traditional Norse method; he cast his <u>high seat pillars</u> (Öndvegissúlur) into the ocean when he saw the coastline, then settled where the pillars came to shore. The story about the pillars is dubious to many people. He obviously settled near the hot springs to keep warm in the winter and would not have determined it by happenstance. Furthermore the probability of the pillars drifting to that location from where they were said to have been thrown from the boat seems improbable. Nevertheless that is what the *Landnamabok* says and says furthermore that Ingolf's pillars are still to be found in a house there in town. Steam from hot springs in the region is said to have inspired Reykjavík's name, which loosely translates to Smoke Cove (the city is sometimes referred to as *Bay of Smoke* or *Smoky Bay* in English language travel guides). In the modern language, as in English, the word for 'smoke' and the word for fog or steamy vapour are

not commonly confused but this is believed to have been the case in the old language. The original name was Reykja*r*vík with an additional "r" that had vanished around 1800.

The Reykjavík area was farmland until the 18th century. In 1752, the <u>King of Denmark, Frederik</u> <u>V</u>, donated the estate of Reykjavík to the <u>Innréttingar Corporation</u>; the name comes from the <u>Danish language</u>word *indretninger*, meaning institution. The leader of this movement was <u>Skúli Magnússon</u> [is]. In the 1750s, several houses were built to house the <u>wool</u> industry, which was Reykjavík's most important employer for a few decades and the original reason for its existence. Other industries were undertaken by the Innréttingar, such as <u>fisheries</u>, <u>sulphur</u> <u>mining</u>, agriculture, and shipbuilding.

The Danish Crown abolished monopoly trading in 1786 and granted six communities around the country an exclusive trading charter. Reykjavík was one of them and the only one to hold on to the charter permanently. 1786 is thus regarded as the date of the city's founding. Trading rights were limited to subjects of the Danish Crown, and Danish traders continued to dominate trade in Iceland. Over the following decades, their business in Iceland expanded. After 1880, <u>free</u> trade was expanded to all nationalities, and the influence of Icelandic merchants started to grow.

## World War II

On the morning of 10 May 1940, following the German occupation of Denmark and Norway on 9 April 1940, four British warships approached Reykjavík and anchored in the harbour. In a few hours, the <u>allied occupation of Reykjavík</u> was complete. There was no armed resistance, and taxi and truck drivers even assisted the invasion force, which initially had no motor vehicles. The Icelandic government had received many requests from the British government to consent to the occupation, but it always declined on the basis of the <u>Neutrality Policy</u>. For the remaining years of <u>World War II</u>, British and later American soldiers occupied camps in Reykjavík, and the number of foreign soldiers in Reykjavík became about the same as the local population of the city. <u>The Royal Regiment of Canada</u> formed part of the garrison in Iceland during the early part of the war.

The economic effects of the occupation were positive for Reykjavík: the unemployment of the Depression years vanished, and construction work began. The British built <u>Reykjavík Airport</u>, which is still in service today, mostly serving domestic flights. The Americans, meanwhile, built <u>Keflavík Airport</u>, situated 50 km (31 mi) west of Reykjavík, which became Iceland's primary international airport. In 1944, the Republic of Iceland was founded and a <u>president</u>, elected by the people, replaced the King; the office of the president was placed in Reykjavík.

## **Rise of nationalism**

<u>Icelandic nationalist</u> sentiment gained influence in the 19th century, and the idea of Icelandic independence became widespread. Reykjavík, as Iceland's only city, was central to such ideas. Advocates of an independent Iceland realized that a strong Reykjavík was fundamental to that objective. All the important events in the history of the independence struggle were important to Reykjavík as well. In 1845 <u>Alþingi</u>, the general assembly formed in 930 AD, was re-established in Reykjavík; it had been suspended a few decades earlier when it was located at <u>bingvellir</u>. At the time it functioned only as an advisory assembly, advising the King about Icelandic affairs. The location of Alþingi in Reykjavík effectively established the city as the capital of Iceland.

In 1874, Iceland was given a constitution; with it, Alþingi gained some limited legislative powers and in essence became the institution that it is today. The next step was to move most of the executive power to Iceland: <u>Home Rule</u> was granted in 1904 when the office of <u>Minister For</u> <u>Iceland</u> was established in Reykjavík. The biggest step towards an independent Iceland was taken on 1 December 1918 when Iceland became a sovereign country under the <u>Crown of</u> <u>Denmark</u>, the <u>Kingdom of Iceland</u>.

By the 1920s and 1930s most of the growing Icelandic fishing trawler fleet sailed from Reykjavík; <u>cod</u> production was its main industry, but the <u>Great Depression</u> hit Reykjavík hard with unemployment, and labour union struggles sometimes became violent.

## Post-war development

In the post-war years, the growth of Reykjavík accelerated. An exodus from the rural countryside began, largely because improved technology in agriculture reduced the need for manpower, and because of a population boom resulting from better living conditions in the country. A once primitive village was rapidly transformed into a modern city. Private cars became common, and modern apartment complexes rose in the expanding suburbs.

In 1972, Reykjavík hosted the <u>world chess championship</u> between <u>Bobby Fischer</u> and <u>Boris</u> <u>Spassky</u>. The 1986 <u>Reykjavík Summit</u> between <u>Ronald Reagan</u> and <u>Mikhail</u> <u>Gorbachev</u> underlined Reykjavík's international status. <u>Deregulation</u> in the financial sector and the computer revolution of the 1990s again transformed Reykjavík. The financial and IT sectors are now significant employers in the city. The city has fostered some world-famous talents in recent decades, such as <u>Björk</u>, <u>Ólafur Arnalds</u> and bands <u>Múm</u>, <u>Sigur Rós</u> and <u>Of Monsters and</u> <u>Men</u>, poet <u>Sjón</u> and visual artist <u>Ragnar Kjartansson</u>.

## Climate

Reykjavík has a <u>subpolar oceanic climate</u> (Köppen: *Cfc*). While not much different from a <u>tundra</u> <u>climate</u>, the city has its present climate classification since the beginning of the twentieth century.<sup>[14][15]</sup>

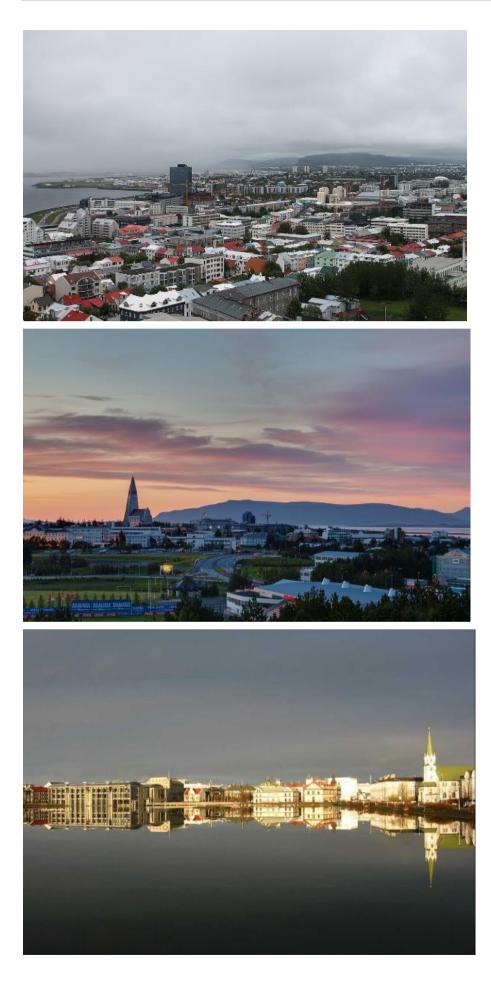
Despite its northern latitude, temperatures very rarely drop below -15 °C (5 °F) in the winter. The proximity to the Arctic Circle and the strong moderation of the Atlantic Ocean in the Icelandic coast (influence of North Atlantic Current, an extension of the Gulf Stream) shape a very cool but not rigorous winter without a real summer. The city's coastal location does make it prone to wind, however, and gales are common in winter. Summers are cool, with temperatures fluctuating between 10 and 15 °C (50 and 59 °F), rarely exceeding 20 °C (68 °F). Reykjavík averages 147 days at the threshold of 1 mm per year. Droughts are uncommon, although they occur in some summers. In the summer of 2007, no rain was measured for one month. Summer tends to be the sunniest season, although May receives the most sunshine of any individual month. Overall, the city receives around 1,300 annual hours of sunshine,<sup>[17]</sup> which is comparable with other places in Northern and North-Western Europe such as Ireland and Scotland, but substantially less than equally Northern regions with a more continental climate. including Finland, Nonetheless, Revkjavik is one of the cloudiest and coolest capitals of any nation in the world. The highest ever recorded temperature in Revkiavík was 25.7 °C (78 °F). recorded on July 30, 2008, while the lowest ever recorded temperature was -19.7 °C (-3 °F), recorded on January 30, 1971.

### **Demographics**

Reykjavík is the largest and most populous settlement in Iceland. The municipality of Reykjavík had a population of 128,793 on 1 January 2019; that is 36% of the country's population. The <u>Capital Region</u>, which includes the capital and six municipalities around it, was home to 228,231 people; that is over 63% of the country's population.

On 1 January 2018, of the city's population of 126,041, immigrants of the first and second generation numbered 20,910 (16.6%) The most common foreign citizens were <u>Poles</u>, <u>Lithuanians</u>, and <u>Latvians</u>.

Children of foreign origin form a more considerable minority in the city's schools: as many as a third in places. The city is also visited by thousands of tourists, students, and other temporary residents, at times outnumbering natives in the city centre.





## Hotel Skjaldbreið



## Hvalfjörður

**Hvalfjörður** (Icelandic pronunciation: <u>['kʰva:l fjœrðʏr]</u>, <u>whale-fjord</u>) is situated in the west of <u>Iceland</u> between <u>Mosfellsbær</u> and <u>Akranes</u>. The fjord is approximately 30 km long and 5 km wide.

The origin of the name Hvalfjörður is uncertain. Certainly today there is no presence of whales in the fjord; while there is a whaling station in the fjord, whaling is conducted in the open ocean outside the fjord; likewise, it is modern and postdates the naming of the fjord. One theory as to the naming of the fjord is that early settlers encountered a pod of whales trapped in the fjord who ended up beached; the stranding of whales was in early Iceland a godsend in the meat that it provided, to the point that the word "hvalreki" means both "whale beaching" and "windfall/godsend". However, there is no direct evidence to support this theory. Another theory is that the fjord is named after Hvalfjall ("Whale Mountain", a mountain at the bottom of the fjord), which would have been in turn named after its visual appearance. A common folk story of unknown age also is sometimes presented as the origin of the name, involving an elf woman who transformed her human lover into an angry red-headed whale ("Rauðhöfði"), who subsequently lived in the fjord wrecking ships, as revenge for him refusing to acknowledge their child.

The only whaling stations in Iceland is still located in this fjord. In the past the fjord also contained a large number of herring fisheries.

During <u>World War II</u>, a <u>naval base</u> of the <u>British</u> and <u>American</u> navies could be found in this fjord. The British base, <u>HMS Baldur</u>, was at Hvitanes, on a small point of land jutting into the fjord.<sup>[1]</sup> The base was the headquarters of the <u>Flag Officer Commanding, Iceland (C)</u>. One of the piers built by the United States Navy is today used by the Hvalur whaling company for the processing of fin whales, partially for the domestic market, and mostly for export to Japan.

Until the late 1990s, those travelling by car had to make a long detour of 62 km around the fjord on the <u>hringvegur</u> (road no.1), in order to get from the city of <u>Reykjavík</u>to the town of <u>Borgarnes</u>. In 1998, the tunnel <u>Hvalfjarðargöngin</u>, which shortens the trip considerably, was opened to public traffic. The tunnel is approximately 5,762 m in length, and cuts travel by car around the fjord by about an hour. The tunnel runs to a depth of 165 m below sea level.

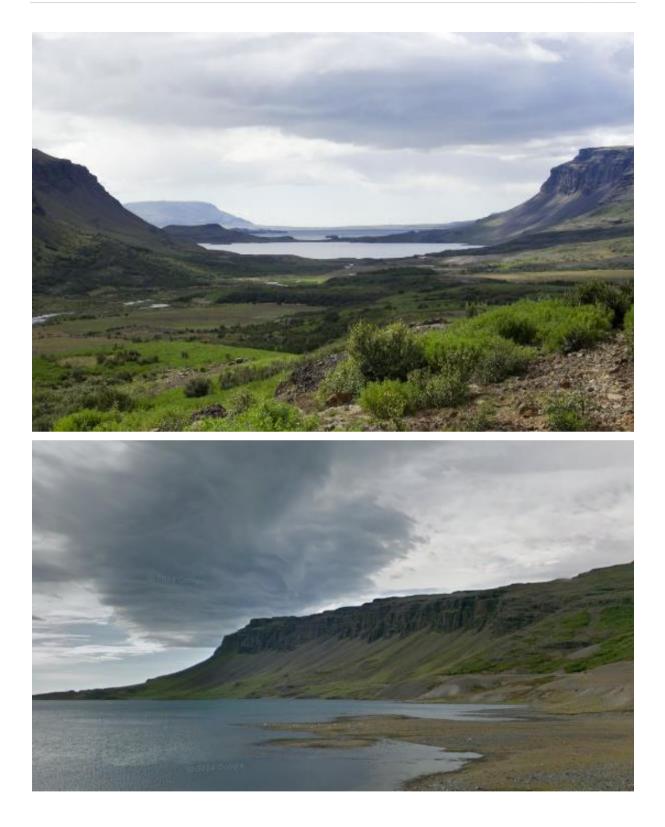
The south side of the fjord runs through the municipality of <u>Kjós</u>. Two different rivers named Fossá (Waterfall River) cross the road, each having a number of cascades, although the western one is easy to miss from the road, as its main fall tumbles from beneath the road into a lower forest. The sizeable <u>Laxá</u> (Salmon River) crosses the road near the heart of Kjós; south of it lies the lake <u>Meðalfellsvatn</u>, home to a large number of summer houses. The large sandbar Hvalfjarðareyri is a popular place to see birds.

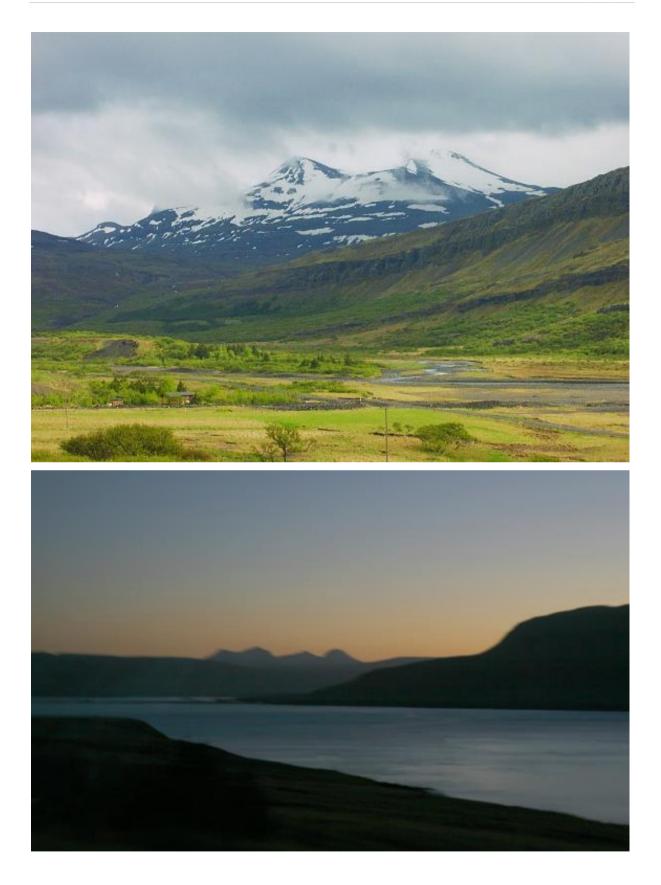
The innermost part of the fjord shows an interesting mixture of <u>volcanic</u> mountains and green vegetation in summertime. At *Botnsá*, <u>Nootka lupine</u> is common, along with other flowers and moss, as well as small forests of <u>birch</u> and <u>conifers</u>. The area displays a good example of the planting of forests, a project that has been going on in Iceland for some years.

A hiking trail to the formerly-highest <u>waterfall in Iceland</u>, <u>Glymur</u>, has its origin at the innermost end of the fjord. The somewhat steep trail up the rim of the deep river gorge is called Leggjabrjótur, meaning "Broken Leg". Before the ascent it passes through a short cave and across a thin improvised bridge. While it is possible to reach the bottom of the falls, it is not recommended; one has to wade through the cold river into the canyon, which is dim and at constant risk of falling rocks.

In the northwestern part of the fjord lies a tiny steep-sided island called <u>Geirshólmi</u>, which was for a time during the <u>Age of the Sturlungs</u> home to a band of outlaws led by <u>Svarthöfði</u> <u>Dufgusson</u> who regularly raided the farms on the mainland. In the northwestern side of the fjord is Grundartangi, where a large aluminum smelter and silicon plant are located.

Hvalfjörður is also referenced in the novella, *The Odd Saga of the American and a Curious Icelandic Flock*; as they pull to a stop at the toll before Hvalfjörður Tunnel, Alex begins to draw an important secret from an intoxicated Snorri.





## Borgarnes

**Borgarnes** (Icelandic pronunciation: ['porkar\_nɛs]) is a town located on a <u>peninsula</u> at the shore of <u>Borgarfjörður</u> in <u>Iceland</u> and is the largest town in the <u>Borgarbyggð</u> municipality with a population of about <u>3750</u> residents. It is a main junction in Iceland and the gateway to the <u>Snaefellsnes</u> National Park. Iceland's capital Reykjavik is 69 kilometers from the centre of Borgarnes. The second largest bridge in Iceland, the <u>Borgarfjarðarbrú</u>, connects traffic to and from Reykjavik.

There are four national forests in the region (approximately 40 km from the town centre) which are overseen by the Icelandic Forest Service. The forest in Borgarfjardur are mix of Birch woods and native conifers. These forests are Vatnshorn, Norðtunga, Selskógar, Stalpastaðir and Jafnaskarð. Borgarnes has the oldest and tallest of the birch trees in Iceland.

The Safnahús Borgarfjarðar is a civilization museum that displays cultural artifacts and historical photos. Safnahús Borgarfjarðar was one of Iceland's first collections to receive the formal recognition of the Saga Council in (2013).

Borgarnes is also one of the filming locations in the Hollywood film <u>The Secret Life of Walter</u> <u>Mitty</u>. The Geirabakari Kaffihus, which is featured in the film, was transformed into Papa John's during the filming.

Borgarnes' commerce is primarily based on agriculture, tourism and culture.



## Búðir

**Búðir** (<u>transliterated</u> Búdir) is a small <u>hamlet</u> in <u>Búðahraun</u> lava fields in <u>Staðarsveit</u>, which is in the western region of <u>Iceland</u>, on the westernmost tip of

the <u>Snaefellsnes peninsula</u> where <u>Hraunhafnará</u> falls to the sea, the original old name of Búðir having been <u>Hraunhöfn</u>.

The village belongs to <u>Snæfellsbær</u>, a <u>municipality</u> that has its administrative centre in the town of <u>Ólafsvík</u>.

### Overview

Just a cluster of old buildings, Búðir is the home of popular country inn and restaurant <u>Hotel</u> <u>Búðir</u> and a very old small church. The original old house of the <u>restaurant</u> and <u>Hótel</u> <u>Búðir</u> burned down on 21 February 2001, and had to be rebuilt completely, so as to resemble the original old inn house and to blend into the existing scenery of old buildings and natural surroundings.

It is believed that commercial ships and fishing vessels have been making their landing at Búðir all the way back to when <u>lceland's</u> first inhabitants made their way there across the ocean, and commercial activity started there very early in recorded history. Originally the main function of Búðir was that to act as a <u>commercial</u> and <u>trade</u> hub for Snæfellsnes and the surrounding west coast region, during an extended period of <u>Danish</u> trade <u>monopoly</u>. Today the small hamlet of Búðir along with Hótel Búðir is a centre of attraction in Snæfellsnes for <u>tourists</u> and various <u>tourism</u> activities.





# Snæfellsjökull

**Snæfellsjökull** (Icelandic pronunciation: <u>['stnai:fɛls jœ:kytl]</u>, *snow-<u>fell glacier</u>*) is a 700,000-yearold <u>glacier</u>-capped <u>stratovolcano</u> in western <u>Iceland</u>. It is situated on the most western part of the <u>Snæfellsnes</u> peninsula in Iceland. Sometimes it may be seen from the city of <u>Reykjavík</u> over <u>Faxa Bay</u>, at a distance of 120 km.

The mountain is one of the most famous sites of Iceland, primarily due to the novel <u>Journey to</u> <u>the Center of the Earth</u> (1864) by <u>Jules Verne</u>, in which the protagonists find the entrance to a passage leading to the centre of the earth on Snæfellsjökull.

The mountain is included in the **Snæfellsjökull National Park** (Icelandic: *Þjóðgarðurinn Snæfellsjökull*).

In August 2012 the summit was ice-free for the first time in recorded history.

### Geology

The <u>stratovolcano</u>, which is the only large central volcano in its <u>part</u> of Iceland, has many <u>pyroclastic cones</u> on its flanks. Upper-

flank <u>craters</u> produced <u>intermediate</u> to <u>felsic</u> materials, while lower-flank craters produced <u>basaltic lava flows</u>. Several <u>holocene</u> eruptions have originated from the summit crater and have produced <u>felsic</u> material. The latest eruption took place 200 AD ± 150 years, and erupted approximately 0.11 cubic kilometres (0.026 cu mi) of volcanic material. The eruption was <u>explosive</u> and originated from the summit crater, and may have produced lava flows.

Snæfellsjökull National Park is Iceland's only National Park to extend to the seashore. The park covers an area of 170 km<sup>2</sup> (65 sq. miles). The Park's southern boundary reaches to Háahraun in the region of <u>Dagverðará</u> while the northern part reaches to <u>Gufuskálar</u>. The coast is varied and alive with birdlife during the breeding season. The coastal plain is mostly covered by lava that flowed from the <u>glacier</u> or nearby <u>craters</u>. The lava is covered with <u>moss</u> but sheltered hollows can be found in many places, filled with a sizable variety of thriving, verdant plants. Snæfellsjökull has trails of lava and signs of volcanic activity clearly visible on its flanks. On its north side the <u>Eysteinsdalur</u> valley cuts a path up from the plain encircled by alluring steep mountains.

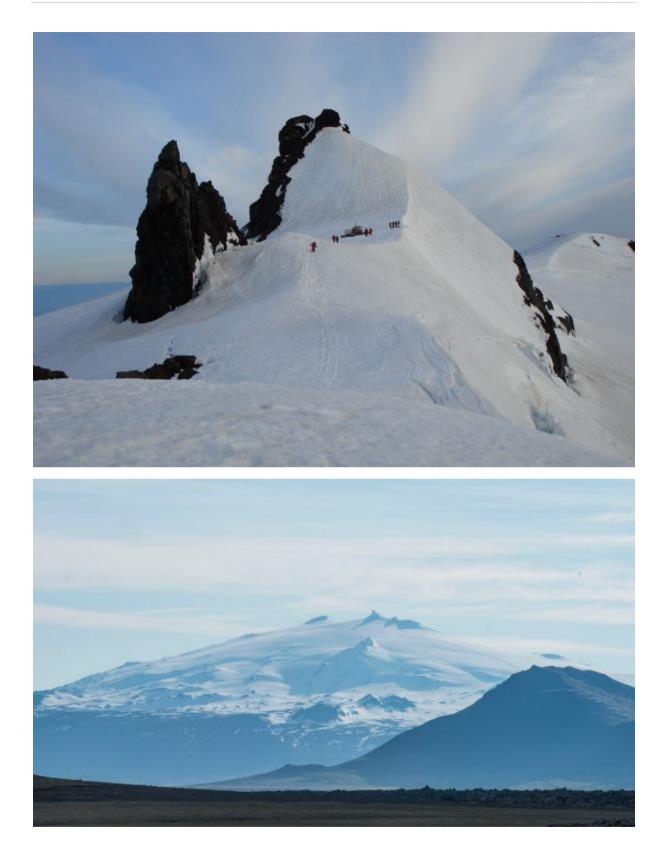
The geology of Snæfellsnes Peninsula is diverse with formations from almost every era of Iceland's past. The more prominent formations in and around the National Park mainly date from geologically "modern" times back to the last ice age. The hills to the north of the glacier, around <u>Bárðarkista</u>, are of volcanic <u>palagonite</u> tuff, formed during <u>eruptions</u> under the glacier or below the surface of the <u>sea</u>. <u>Svalþúfa</u> is most likely the eastern section of a crater that erupted under the sea, while <u>Lóndrangar</u> is a volcanic plug.

<u>Lava</u> is prominent on the landscape of this National Park with two types present – rough, jagged lava ( $\underline{A}, \underline{a}$ ) and smooth, ropy lava (<u>Pāhoehoe</u>). Most of the lava emanated from the glacier, from the summit crater or from subsidiary craters on the flanks of the mountain. These lava formations are varied and fascinating, and there is a wealth of caves in the area. Visitors are advised not to enter caves unless accompanied by an experienced guide. Smaller volcanoes

 – <u>Purkhólar</u>, <u>Hólahólar</u>, <u>Saxhólar</u> and <u>Öndverðarneshólar</u> – are in the Park's lowlands, surrounded by lava.













# Stykkishólmur

**Stykkishólmur** (Icelandic pronunciation: <u>['stThCIS\_houlmYr]</u>) is a town and municipality situated in the western part of <u>Iceland</u>, in the northern part of the <u>Snæfellsnes</u>peninsula. It is a centre of services and commerce for the area. Most of the people make their living from fishing and tourism. A ferry called *Baldur* goes over the <u>Breiðafjörður</u> fjord to the <u>Westfjords</u>. It also is the gateway to <u>Flatey</u>. The origin of Stykkishólmur can be traced to its natural harbor. The location became an important trading post early in Iceland's history: the first trading post in Stykkishólmur is traced back to the mid-16th century, even before Denmark implemented the Danish–Icelandic Trade Monopoly (1602 – 1787). From that time trading has been at the heart of the settlement's history. In 1828 Árni Thorlacius built a large house for his home and companies, the Norwegian house, which has been renovated and accommodates the local museum.

#### Overview

The favourable position of the town was discovered early and in 1550 a trading post was founded at the site. Today, the most important sector of employment in the town after the fishing industry is summer-time tourism.

The town was named after a small island in front of the harbor called *Stykkið* ("the piece"). The nearby mountain of <u>Helgafell</u> is the burial place of <u>Guðrún Ósvífursdóttir</u>, a heroine of the <u>Icelandic sagas</u>.

The town's former library has been restored as a public hall and contains an installation by the American artist <u>Roni Horn</u>.

The sports club of Stykkishólmur is called Snæfell, named after the glacier <u>Snæfellsjökull</u>, which is located on Snæfellsnes. The town's most popular sport is <u>basketball</u>.

#### In popular culture

In the 1986 novel <u>*Red Storm Rising*</u>, Stykkishólmur is the site of a landing by <u>US Marines</u> tasked with liberating Iceland from occupying <u>Soviet</u> forces.

<u>Chess</u> champion <u>Bobby Fischer</u> was planning on moving to Stykkishólmur before his sudden death in early 2008.

Stykkishólmur is the main setting in the short story *Tussenlanding* (*Transfer*) from the 1991 short story collection *De Matador en andere verhalen* by <u>Tim Krabbé</u>. The story features a Dutchman coming to Iceland in hope to start a relationship with an Icelandic woman he barely knows.

Stykkishólmur was one of the destinations in the 2013 movie The Secret Life of Walter Mitty.

### Climate

Stykkishólmur features a true subpolar oceanic climate, the least cold of all the <u>polar climates</u>, with cool summers (<10 °C, considered by most as the limit of polar climates) but with winter averages less cold than cities much further south featuring temperate continental climates, such as Chicago, Milwaukee, Toronto, or Denver, because of the moderating effect of ocean currents.







# Eiríksstaðir

**Eiríksstaðir** is the former homestead of Eiríkr Þorvaldsson, known as <u>Erik the Red</u>, in <u>Haukadalur</u> in the <u>Dalasýsla</u> region of <u>Iceland</u>. It was the birthplace of his son <u>Leif Eiríksson</u>, the first known European discoverer of the Americas. A site thought to be that of the original farm has been investigated by <u>archaeologists</u> and remains of two buildings dating to the 9th–10th centuries have been identified. An <u>open-air museum</u> has been established nearby.



## Historical record

According to <u>Landnámabók</u> and the <u>Saga of Erik the Red</u>, after first settling in <u>Vestfirðir</u>, Eiríkr married Þjóðhildur Jǫrundardóttir and established the farm of Eiríksstaðir near the Vatnshorn in Haukadalur. His son Leifr was born there, but Eiríkr had to leave the area after killing two men in revenge for the deaths of two of his <u>thralls</u>.

## Archaeological investigations

A number of archaeological investigations have been carried out at what is thought to be the site of Eiríksstaðir (now on the land of Stóra-Vatnshorn farm). In 1894 <u>Brynjúlfur Jónsson [is]</u> made a plan of the visible signs of old buildings and they were excavated the following year by <u>Porsteinn</u> <u>Erlingsson</u>. <u>Daniel Bruun</u> [is] made a further investigation in 1896. An excavation in 1938 by <u>Matthías Pórðarson</u> [is]uncovered a building of the <u>longhouse</u> type with a long central <u>firepit</u>. In 1997–2002, at the request of the Eiríksstaðanefnd (Eirísstaðir committee), Guðmundur Ólafsson conducted a further investigation for the <u>National Museum of Iceland</u>.

## Main building

The main building was of a longhouse type, and was measured in the 1997 dig at approximately 50 square metres (540 sq ft) in area and 4 metres (13 ft) long. There was a central fire-pit; this and rows of stones indicate that people sat along the walls. In the initial investigation in 1895, Porsteinn Erlingsson thought there had been an attached bake-house at the rear, but the 1997 dig confirmed Mattías Þórðarson's belief that the rocks there were from a natural landslide. The walls were turf set on a base of rocks, and were about 1–1.5 metres (3.3–4.9 ft) thick; stones in the south wall indicate that it had been repaired. The building was simple in construction and indications are that it had not been occupied for long. <u>C-14 dating</u> of <u>charcoal</u> from an

undisturbed area of human habitation deposits in front of the ruins yielded a date of the 9th–10th century.

## **Pit-house**

In 2000 a <u>pit-house</u> was excavated next to the main building. Among other finds in the floor were carved stone <u>spindles</u> of Norwegian manufacture. Guðmundur Ólafsson interprets this as having been a *dyngja*, a "bower" or women's work-room. It had previously been viewed as a bath-house or sauna (by Þorsteinn Erlingsson) and a kitchen or <u>smokery</u> (by Matthías Þórðarson).

### **Open-air museum**

The Eiríksstaðanefnd created an open-air museum based on the 1997 archaeological investigation. It aims to reproduce Erik the Red's home as accurately as possible; the longhouse was built in imitation of the excavated building, using <u>driftwood</u> and replica tools.<sup>[6]</sup> The museum was created in 1999 and formally opened in 2000 in association with the celebration of the thousand-year anniversary of the discovery of <u>Vinland</u>. It is located approximately 100 metres (yards) from the actual ruins, which are a protected archaeological site.

## Westfjords

The **Westfjords** or **West Fjords** (<u>Icelandic</u>: *Vestfirðir*, <u>ISO 3166-2:IS</u>: **IS-4**) is a large <u>peninsula</u> in northwestern <u>Iceland</u> and an administrative district. It lies on the <u>Denmark Strait</u>, facing the east coast of <u>Greenland</u>. It is connected to the rest of Iceland by a 7-km-

wide <u>isthmus</u> between <u>Gilsfjörður</u> and <u>Bitrufjörður</u>. The Westfjords are very mountainous; the coastline is heavily indented by dozens of <u>fjords</u> surrounded by steep hills. These indentations make roads very circuitous and communications by land difficult. In addition many of the roads are closed by ice and snow for several months of the year. The <u>Vestfjarðagöng</u> road tunnel from 1996 has improved that situation. The cliffs at <u>Látrabjarg</u> comprise the longest <u>bird cliff</u> in the northern <u>Atlantic Ocean</u> and are at the westernmost point in Iceland. The <u>Drangajökull</u> glacier is located in the north of the peninsula and is the fifth-largest of the country, but the only glacier of the region.

Reykjanes is a peninsula and is located in Westfjords, Iceland. The estimate terrain elevation above sea level is 322 metres. Variant forms of spelling for Reykjanes or in other languages: Reykjanes (is), Reykjanes.

## Population

The lack of flat lowlands in the area limits the potential for agriculture, which is mostly restricted to low-intensity sheep grazing near the fjords. Good natural harbors in many of the fjords and their proximity to fishing areas are vital for the local economy. The Westfjords are very sparsely populated: the total population in 2007 was 7,380. The district capital and by far the largest settlement is <u>Ísafjörður</u> (population around 4000).



From the darkness in winter to twenty-four hours of daylight in the summer, midnight sun shining bright or northern lights dancing in the sky. From dusk to dawn has a different meaning in the Arctic, light and colours of the sky please the eye in various ways throughout the year.

## **Hotel Bifröst**



Hotel Bifröst is located on the beautiful west coast of Iceland, only 100 km from Reykjavik via the Ring Road (Road 1), which is Iceland's main highway. The hotel shares this scenic and historic location with the campus for Bifröst University, which makes Bifröst feel like a small village, complete with its own restaurant, grocery store, gym, leisure room, golf-course, children's playground, hot-tubs, and a sauna. This west coast region is well known for its natural beauty, including the ragged coast-line, historic old towns and Viking era sites, salmon rivers and trout lakes, several waterfalls, geothermal swimming pools, and the list goes on.

## Baula

**Baula** is a mountain situated in the west of <u>Iceland</u> near <u>Route 1</u>, <u>Bifröst University</u>, and the <u>craters</u> of Grábrók. The mountain's reddish or orange hue is caused by its <u>rhyolite</u> rock composition.

Geologically, the mountain is a <u>laccolith</u>,<sup>[1]</sup> a type of igneous <u>intrusion</u>. It was formed 3.4 million years ago.

Baula is characterized by its almost perfect cone. Nearby is Baula's "little sister," a mountain called <u>Litla-Baula</u>, where rare <u>columns</u> of rhyolite are found. Together, Baula and Litla-Baula have often been described as Iceland's most beautiful pair of mountains.



# Uxahryggir

Þingvallavegur or **Route 36** is a primary road in southern <u>Iceland</u>. The road forms the main route from <u>Revkjavík</u> to <u>Thingvellir</u>, as well as old Sogsvegar down to <u>Thingvallavatn</u> which connects the towns. The road is 68 km long, of which 33 km is from <u>Vesturlandsvegur</u>, the service centre at Thingvellir.

Starting from its junction with the Biskupstungnabraut (35) in <u>Prastarskógi</u> the road runs north and forms a bypass of <u>Ljósafossvirkjun</u> and <u>Steingrímsstöd</u>. Further on the road reaches <u>Gjábakkahellir</u> and a crossroads with Lyngdal Heiðarvegur (365) and bingvallavegi (361). From here the road runs around the north of Thingvellir where it connects with Uxahryggir (52) and (550).

Now the route is heading west towards Reykjavík, halfway along it meets the road Kjós Pass Road (48) in <u>Háheiðinni</u>. Earlier in the 20th century the road was considerably further south. The current layout now, however, the northernmost Mosfellsheiði set in clay Vogs water, but then down mosfellsdalur out Vesturlandsvegur above Mosfellsbæ. Finally the route ends on the Ring Road (1) just outside Reykjavík.

The road from the capital was not fully paved until shortly before the republic birthday in 1994, and part of Sogsveginum was still a gravel surface until 2000. More often than not has been done to repair the road when stórhátíðar at Thingvellir have been on the agenda.



## Þingvellir

**bingvellir** (Icelandic: ['<u>0ink,vɛtlɪr</u>] (<u>0isten</u>)), anglicised as **Thingvellir**, is a <u>national park</u> in the municipality of <u>Bláskógabyggð</u> in southwestern <u>Iceland</u>, about 40 km northeast of Iceland's capital, <u>Reykjavík</u>. Þingvellir is a site of historical, cultural, and geological significance, and is one of the most popular tourist destinations in Iceland. The park lies in a <u>rift valley</u> that marks the crest of the <u>Mid-Atlantic Ridge</u> and the boundary between the <u>North</u> <u>American</u> and <u>Eurasiantectonic plates</u>. To its south lies <u>bingvallavatn</u>, the largest natural lake in Iceland.

Þingvellir is associated with the <u>Althing</u>, the national parliament of Iceland, which was established at the site in 930 AD. Sessions were held at the location until 1798.

Þingvellir National Park (*bjóðgarðurinn á Þingvöllum*) was founded in 1930, marking the 1000th anniversary of the Althing. The park was later expanded to protect the diverse and natural phenomena in the surrounding area, and was designated as a <u>World Heritage Site</u> in 2004.



#### Toponymy

The name *Þingvellir* is derived from the <u>Old Norse</u> *Þingvǫllr*, from *<u>bing</u> ("thing</u>, assembly") and <u><i>v*ǫllr</u> ("field"), meaning assembly fields. Compare the English <u>thing</u> and <u>*w*eald</u> ("Thingweald") from <u>Anglo-Saxon</u> <u>*bing*</u> and <u>*w*eald</u>. The site takes its name from <u>Albing</u> (Althing), the national parliament of Iceland, which was founded at Þingvellir in 930 and held its sessions there until 1798. A <u>thing</u> was a form of governing assembly found in <u>Germanic</u> societies, and a tradition that endures to this day in one form or another across <u>Northern Europe</u>.

Although the name *Þingvellir* is plural, the older form *Þingvǫllr* is singular, and the modern singular form *Þingvöllur* can still be heard.

The name is most commonly anglicised as *Thingvellir*, and might appear as *Tingvellir*, *Thingvalla* or *Tingvalla* in other languages. The spelling *Pingvellir* is also seen, although the letter "p" does not correspond to the letter <u>"b" (thorn)</u>, which is pronounced <u>[ $\Theta$ ]</u>, like the *th* in *thirst*.

<u>Dingwall</u> and <u>Tingwall</u> in <u>Scotland</u>, <u>Thingwall</u> in <u>England</u>, <u>Tynwald</u> on the <u>Isle of Man</u>, and <u>Tingvoll</u> in <u>Norway</u> bear names of the same root and meaning.

#### History

*bingvellir* became a national park as a result of legislation passed in 1928 to protect the remains of the parliament site, thus creating the first national park in Iceland. The park was decreed "a protected national shrine for all Icelanders, the perpetual property of the Icelandic nation under the preservation of parliament, never to be sold or mortgaged."

### Founding of Iceland's parliament

According to the <u>Book of Settlements</u> (*Landnámabók*), the <u>settlement of Iceland</u> began in AD 874 when the Norwegian chieftain <u>Ingólfr Arnarson</u> became the first permanent <u>Norwegian</u> settler on the island.<sup>[500]</sup>Over the next centuries, people of <u>Norse</u> and <u>Celtic</u> origin settled in Iceland. Early on, district assemblies were formed, but as the population grew, there was a need for a general assembly. The descendants of Ingólfur who dominated the region of southwest Iceland had become the most powerful family in the country, and other chieftains felt a need for a general assembly to limit their power.

<u>Grímur Geitskör</u> was allotted the role of rallying support and finding a suitable location for the assembly. At about the same time, the owner of Bláskógar (the contemporary name for the Þingvellir region) was found guilty of murder. His land was declared public, and then obligated to be used for assembly proceedings, and the building of temporary dwellings, and the forest to be used for kindling and the <u>grazing</u> of horses. The Þingvellir area was chosen for this reason and for its accessibility to the most populous regions of the north, south and west.<sup>[II]</sup> The longest journey a <u>goði</u> (chieftain) had to travel was 17 days, from the easternmost part of the country where mountains and glacial rivers proved bothersome obstacles.

The foundation of the Icelandic parliament is said to be the founding of the nation of <u>Iceland</u>, and the first parliamentary proceedings in the summer of 930 laid the ground for a common cultural heritage and national identity. Þingvellir played a central role in the history of the country, and its history runs almost parallel with the history of the <u>Icelandic Commonwealth</u>.









The <u>Alþingi</u> (assembly) at Þingvellir was Iceland's supreme legislative and judicial authority from its establishment in 930 until 1271. The <u>Lögberg</u> or Law Rock was the focal point of the Alþingi and a natural platform for holding speeches. The Lawspeaker, elected for three years at a time, presided over the assembly and recited the law of the land. Before the law was written down, he was expected to recite it from memory on the Lögberg over the course of three summers along with the complete assembly procedures every summer. Inauguration and dissolution of the assembly took place at the Lögberg, where rulings made by the Law Council were announced, the calendar was confirmed, legal actions were brought and other announcements made which concerned the entire nation. Anyone attending the assembly was entitled to present his case on important issues from the Lögberg.

The Law Council served as both parliament and supreme court. Laws were passed and approved there, and rulings made on points of law. The Law Council appointed members of the Fifth Court (a kind of <u>appellate court</u>) and the Lawspeaker, and took part in the election of the bishop. Unlike the Alþingi, the Law Council was a closed body in which only certain people enjoyed full rights: chieftains who held the office of *goði*, their *Pingmen* and later also bishops. However, everyone at the assembly was entitled to watch and listen to the Law Council at work.

From the earliest times until the 15th century, the Law Council met at Neðri-Vellir on the east bank of Öxará, but when the river changed its course around 1500, the council was moved to an islet in the river. In 1594, the Law Council was relocated to the foot of the ancient Law Rock, where it remained until the Alþingi was finally transferred from it in 1798.

The Alþingi was Iceland's legislative and chief judicial authority for the duration of the <u>Commonwealth</u>, until 1271. Executive power was in the hands of the chieftains and parties to individual cases. This proved to be quite an adequate arrangement for as long as the balance of power remained, but flaws emerged when it was disrupted.

In the final decades of the Commonwealth, there were clashes between chieftain families, which resulted in Iceland coming under the Norwegian crown. Executive power was strengthened under this new order, while legislative and judicial authority at first remained in the hands of the Alþingi, but was gradually transferred to the Norwegian and later the Danish rulers, until in 1662, the King of Denmark became the absolute monarch of Iceland.

### **Social centre**

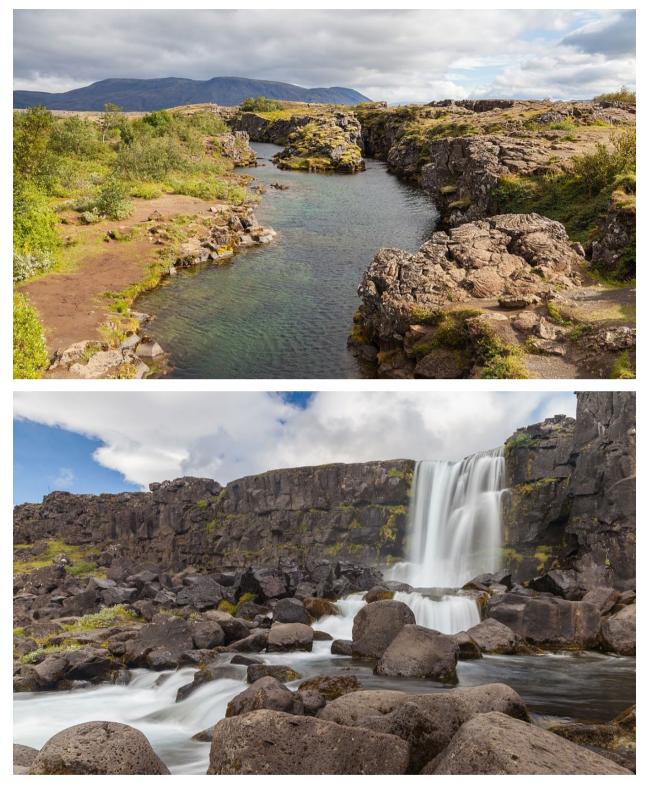
Þingvellir was the centre of Icelandic culture. Every year during the Commonwealth period, people would flock to Þingvellir from all over the country, sometimes numbering in the thousands.

They set up temporary dwellings (*búð*, <u>pl.</u> *búðir*) with walls of turf and rock and temporary roofing of homespun cloth, and stayed in them for the two weeks of the assembly. There were no permanent buildings on Þingvellir apart from a farm and, later, two churches.

Although the duties of the assembly were the main reason for going there, ordinary people gathered at Þingvellir for a wide variety of reasons. Merchants, sword-sharpeners, and tanners would sell their goods and services, entertainers performed, and ale-makers brewed drinks for the assembly guests. News was told from distant parts; games and feasts were held. Young people met to make their plans, no less than leading national figures and experts in law. Itinerant farmhands looked for work and vagrants begged. Þingvellir was a meeting place for everyone in Iceland, laying the foundation for the language and literature that have been a prominent part of people's lives right up to the present day.

## **Nationalist symbol**

During the 19th century, Þingvellir emerged as a nationalist symbol. According to Icelandic political scientist Birgir Hermannsson, "Thingvellir can be likened to a church or building which serves as a pilgrimage destination and as a site for the nation-state's ritual ceremonies."



Þingvellir is notable for its unusual tectonic and volcanic environment in a rift valley.

The <u>continental drift</u> between the <u>North American</u> and <u>Eurasian Plates</u> can be clearly seen in the cracks or <u>faults</u> which traverse the region, the largest one, Almannagjá, being a veritable canyon. This also causes the often measurable <u>earthquakes</u> in the area.<sup>[11]</sup>

Some of the rifts are full of clear water. One, Nikulásargjá, was bridged for the occasion of the visit of <u>King Frederick VIII of Denmark</u> in 1907. On this occasion, visitors began to throw coins from the bridge into the fissure, a tradition based on European legends. [citation needed] The bottom has

become littered with sparkling coins, and the rift is now better known as Peningagjá, or "coin fissure".

Þingvellir is situated on the northern shore of <u>Þingvallavatn</u>, the largest natural <u>lake of Iceland</u>. The river <u>Öxará</u> traverses the national park and forms a waterfall at the Almannagjá, called <u>Öxarárfoss</u>. On the lake's northern shore the <u>Silfra</u> fissure is a popular diving and snorkelling tour location.

*bingvellir* was designated a <u>UNESCO</u> <u>World Heritage Site</u> based on cultural criteria. It may also qualify on geological criteria in the future, as there has been ongoing discussion of a possible "serial trans-boundary nomination" for the Mid-Atlantic Ridge, which would include other sites in the Atlantic such as <u>Pico Island</u>.

Together with the waterfall <u>Gullfoss</u> and the <u>geysers</u> of <u>Haukadalur</u>, Þingvellir is part of a group of the most famous sights of Iceland, the <u>Golden Circle</u>.

## Gullfoss

### History and description

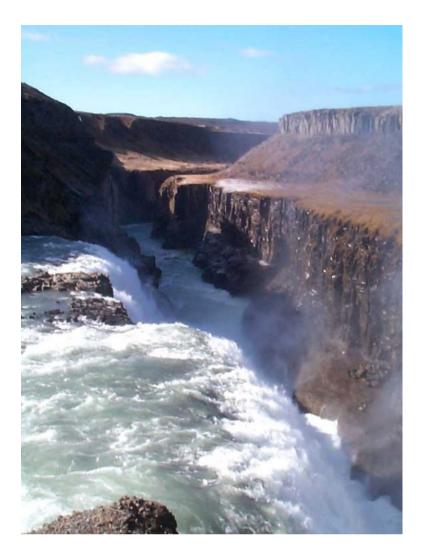
The wide <u>Hvítá</u> river flows southward, and about a kilometre above the falls it turns sharply to the right and flows down into a wide curved three-step "staircase" and then abruptly plunges in two stages (11 metres or 36 feet, and 21 metres or 69 feet) into a crevice 32 metres (105 ft) deep. The crevice, about 20 metres (66 ft) wide and 2.5 kilometres (1.6 mi) in length, extends perpendicular to the flow of the river. The average amount of water running down the waterfall is 140 cubic metres (4,900 cu ft) per second in the summer and 80 cubic metres (2,800 cu ft) per second in the winter. The highest flood measured was 2,000 cubic metres (71,000 cu ft) per second.

During the first half of the 20th century and some years into the late 20th century, there was much speculation about using Gullfoss to generate electricity. During this period, the waterfall was rented indirectly by its owners, Tómas Tómasson and Halldór Halldórsson, to foreign investors. However, the investors' attempts were unsuccessful, partly due to lack of money. The waterfall was later sold to the state of Iceland, and is now protected.

<u>Sigríður Tómasdóttir</u>, the daughter of Tómas Tómasson, was determined to preserve the waterfall's condition and even threatened to throw herself down. Although it is widely believed, the very popular story that Sigríður saved the waterfall from exploitation is untrue. A stone memorial to Sigriður, located above the falls, depicts her profile.

Gullfoss is one of the most popular tourist attractions in Iceland. Together with <u>bingvellir</u> and the <u>geysers</u> of <u>Haukadalur</u>, Gullfoss forms part of the <u>Golden Circle</u>, a popular day excursion for tourists in Iceland.





## Geysir

**Geysir** (Icelandic pronunciation: ['ke:isɪr] (Isten)), sometimes known as **The Great Geysir**, is a <u>geyser</u> in southwestern <u>Iceland</u>. It was the first geyser described in a printed source and the first known to modern Europeans. [citation needed] The <u>English</u> word <u>geyser</u> (a periodically spouting <u>hot</u> <u>spring</u>) derives from Geysir. The name *Geysir* itself is derived from the <u>Icelandic</u> verb <u>geysa</u> ("to gush") the verb from <u>Old Norse</u>. Geysir lies in the <u>Haukadalur</u> valley on the slopes of <u>Laugarfjall</u> hill, which is also the home to <u>Strokkur</u> geyser about 50 metres (160 ft) south.

Eruptions at Geysir can hurl boiling water up to 70 metres (230 ft) in the air. However, eruptions may be infrequent, and have in the past stopped altogether for years at a time.

### History

The research of <u>sinter</u> shows that Geysir has been active for approximately 10,000 years. The oldest accounts of hot springs at Haukadalur date back to 1294, when earthquakes in the area caused significant changes in local neighbouring landscape creating several new hot springs. Changes in the activity of Geysir and the surrounding geysers are strongly related to <u>earthquake</u> activity. In records dated 1630, the geysers erupted so violently that the valley around them trembled. The placename "Geysir" has been first mentioned in written sources in 18th century and, as unusual natural phenomena were of high interest to the society during the <u>Age of Enlightenment</u>, the term became popular and has been used for similar hydrothermal features worldwide since then.

In 1845, it reached a height of 170 metres (560 ft). In 1846, the research of Geysir by <u>Robert</u> <u>Bunsen</u> resulted with the explanation of the mechanism of geyser activity. Measurements of professor Bunsen in this year showed that Geysir was erupting 45–54 metres (148–177 ft) high.

History of recent centuries shows that earthquakes have tended to revive the activity of Geysir which then subsides again in the following years. Before 1896, Geysir was almost dormant before an earthquake that year caused eruptions to begin again, occurring several times a day, lasting up to an hour and causing spouts of up to 60 metres (200 ft) in height. In 1910, it was active every 30 minutes; five years later, the time between the eruptions was as much as six hours, and in 1916, the eruptions all but ceased. In 1935, a man-made channel was dug through the <u>silica</u> rim around the edge of the geyser vent. This ditch caused a lowering of the <u>water table</u> and a revival in activity. Gradually this channel became too clogged with silica and eruptions again became rare.

In 1981, the ditch was cleared again and eruptions could be stimulated, on special occasions, by the addition of soap. Due to environmental concerns, the practice of adding <u>soap</u> was seldom employed during the 1990s. During that time, Geysir seldom erupted. When it did erupt, it was spectacular, sending boiling water sometimes up to 70 metres (230 ft) into the air. On the <u>lcelandic National Day</u>, authorized government geologists would force an eruption. A further earthquake in 2000 revived the geyser again and it reached 122 meters for two days<sup>[ctetion needed]</sup>, thus becoming one of the highest known geysers in history (<u>Waimangu Geyser</u> in New Zealand erupted up to 460 metres (1,510 ft) high, but stopped erupting around 1900). Initially, eruptions were taking place on average eight times a day. By July 2003, this activity had again decreased to around three times per day.

The nearby geyser <u>Strokkur</u> erupts much more frequently than Geysir, erupting to heights of up to 30 metres (98 ft) every few minutes. Strokkur's activity has also been affected by earthquakes, although to a lesser extent than the Great Geysir. Due to its eruption frequency, online photos and videos of Strokkur are regularly mislabelled as depicting Geysir. There are around thirty much smaller geysers and hot pools in the area, including one called Litli Geysir ('Little Geysir').

Descriptions of the Great Geysir and Strokkur have been given in many travel guides to Iceland published from the 18th century onwards. Together with <u>bingvellir</u> and the <u>Gullfoss</u> waterfall, they are part of the <u>Golden Circle</u> that make up the most famous tourist route in the country.

### Ownership of the Geysir area

Until 1894, the Geysir area was owned by a local farmer. In that year the area was sold to <u>James</u> <u>Craig</u> (later <u>Lord Craigavon</u>), a <u>whiskey</u> distiller from <u>Ulster</u> and a future <u>Prime Minister of</u> <u>Northern Ireland</u>. Initially, he erected large fences around the site and an entrance fee was charged for visitors wishing to view the geysers. The following year, however, Craig appeared to tire of his project and gave the area as a present to a friend, E. Craig, who dropped the entrance fees. Later Craig's nephew Hugh Rogers inherited the site. In 1935, he sold the site to film director <u>Sigurður Jónasson</u> who subsequently donated it to the Icelandic people in perpetuity.





## Thórsmörk

**Thórsmörk** (<u>lcelandic</u>: *bórsmörk*, Ilisten] (<u>help·info</u>)) is a mountain ridge in <u>lceland</u> that was named after the <u>Norse</u> god <u>Thor</u> (bór). It is situated in the south of lceland between the <u>glaciers</u> <u>Tindfjallajökull</u> and <u>Eyjafjallajökull</u>. The name "Thórsmörk" properly refers only to the mountain ridge between the rivers <u>Krossá</u>, <u>bröngá</u>, and <u>Markarfljót</u>, but is sometimes used informally to describe a wider area that includes the region between Thórsmörk and Eyjafjallajökull. Thórsmörk is one of the most popular hiking areas in lceland.

In the valley, the river Krossá winds between the mountains. The valley is closed in between glaciers, <u>Mýrdalsjökull</u> being at the rear end of the valley. This leads to an especially warm climate, better than in the rest of south Iceland. In the protected valley, green vegetation of <u>moss</u>, fern, <u>birchwood</u>, and other small shrubs are found.

Thórsmörk is popular amongst hikers. Many different tours are possible, from hiking on the glaciers to trekking (i.e., <u>Laugavegur</u> up to <u>Landmannalaugar</u>) or smaller excursions, such as to the canyon <u>Stakkholtsgjá</u> with its waterfall or five small day treks, to the summits of surrounding peaks, with rewarding views, even in bad weather. The Krossá is a cold, fast river coming down from glaciers; a bridge allows <u>pedestrians</u> to cross. Coaches arrive daily from <u>Revkjavík</u> and other towns in Iceland.



# Eyjafjallajökull

**Eyjafjallajökull** (Icelandic: ['ei:ja\_fjatla\_jœ:kyt]] (Isten) <u>EY-ya-FYA-htla-YUH-kuhtl</u>; English: Island Mountain Glacier) is one of the smaller <u>ice caps</u> of <u>Iceland</u>, north of <u>Skógar</u> and west of <u>Mýrdalsjökull</u>. The ice cap covers the <u>caldera</u> of a <u>volcano</u> with a summit elevation of 1,651 metres (5,417 ft). The volcano has erupted relatively frequently since the <u>last glacial period</u>, most recently in 2010.

## Geography

Eyjafjallajökull consists of a volcano completely covered by an ice cap. The ice cap covers an area of about 100 square kilometres (39 sq mi), feeding many <u>outlet glaciers</u>. The main outlet glaciers are to the north: Gígjökull, flowing into Lónið, and Steinholtsjökull, flowing into Steinholtslón. In 1967, there was a massive landslide on the Steinholtsjökull glacial tongue. On 16 January 1967 at 13:47:55 there was an explosion on the glacier. It can be timed because the seismometers at <u>Kirkjubæjarklaustur</u> monitored the movement. When about 15,000,000 cubic metres (530,000,000 cubic feet) of material hit the glacier a massive amount of air, ice, and water began to move out from under the glacier into the lagoon at the foot of the glacier.

The mountain itself, a <u>stratovolcano</u>, stands 1,651 metres (5,417 ft) at its highest point, and has a <u>crater</u> 3–4 kilometres (1.9–2.5 mi) in diameter, open to the north. The crater rim has three main peaks (clockwise from the north-east): Guðnasteinn, 1,500 metres (4,900 ft); Hámundur, 1,651 metres (5,417 ft); and Guðnasteinn, 1,497 metres (4,911 ft). The south face of the mountain was once part of Iceland's <u>coastline</u>, from which, over thousands of years, the sea has retreated some 5 kilometres (3 mi). The former coastline now consists of sheer cliffs with many <u>waterfalls</u>, of which the best known is <u>Skógafoss</u>. In strong winds, the water of the smaller falls can even be blown up the mountain. The area between the mountain and the present coast is a relatively flat strand, 2 to 5 km (1 to 3 miles) wide, called Eyjafjöll.

## Etymology

The name means "<u>glacier</u>" (or more properly here "<u>ice cap</u>") of the Eyjafjöll. The word *jökull*, meaning glacier or ice cap, is a <u>cognate</u> with the <u>Middle English</u>word *ikel* surviving in the *-icle* of English <u>icicle</u>.

*Eyjafjöll* is the name given to the southern side of the volcanic massif together with the small mountains which form the foot of the volcano.

The name *Eyjafjöll* is made up of the words *eyja* (genitive plural of *ey*, meaning *eyot* or *island*), and the plural word *fjöll*, meaning *fells* or *mountains*, and together literally means: "the mountains of the islands". The name probably refers to the close by archipelago of <u>Vestmannaeyjar</u>.

The word *fjalla* is the genitive plural of *fjöll*, and so *Eyjafjalla* is the genitive form of *Eyjafjöll* and means: "of the Eyjafjöll". A literal part-by-part translation of *Eyjafjallajökull*would thus be "Islands' Mountains' ice cap".

Eyjafjallajökull is sometimes referred to by the numeronym "E15".

### Geology

The <u>stratovolcano</u>, whose vents follow an east-west trend, is composed of <u>basalt</u> to <u>andesite lavas</u>. Most of its historical eruptions have been <u>explosive</u>. However, <u>fissure</u> <u>vents</u> occur on both (mainly the west) sides of the volcano.

The volcano is fed by a <u>magma chamber</u> under the mountain, which in turn derives from the <u>tectonic divergence</u> of the <u>Mid-Atlantic Ridge</u>. It is part of a chain of volcanoes stretching across Iceland. Its nearest active neighbours are <u>Katla</u>, to the northeast, and <u>Eldfell</u>, on <u>Heimaey</u>, to the southwest. The volcano is thought to be related to Katla geologically, in that eruptions of Eyjafjallajökull have generally been followed by eruptions of Katla. Eyjafjallajökull erupted in the years 920, 1612 and 2010.







