

FIELD TRIP

ÞÓRSMÖRK OG VESTMANNAEYJAR THÓRSMÖRK AND THE WESTMAN ISLANDS



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Thórs mörk

One of the most beloved natural attractions in Iceland and highly popular for hiking. Located 150 km south-east of Reykjavík, right next to the famous volcano Eyjafjallajökull

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Eyjafjallajökull

A volcano and a glacier in the south of Iceland which last erupted in 2010. Famous for its name and for disrupting all air travel in Europe during the eruption.

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Vestmannaeyjar

Westman islands are located 10 km south of Iceland, with Heimaey the biggest and the only inhabited island. In 1973 a volcanic eruption began 150m. from the town (map of the town on page Error! Bookmark not



The International Carbon Conference

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A detailed schedule of the field trip.

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What to bring on the adventure.

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Itinerary

This field guide consists of a short introduction to the International Carbon Conference 2018 field trip planned for September 13th - 14th 2018. Everyone involved should be aware that the schedule is subject to change and some of the trips might be altered due to unforeseen events.

The short version for the planned trip is to leave early morning on September 13th. The bus leaves from the University of Iceland, Askja, and drives to B́asar, Th́orsmörk. After lunch, various hikes will be offered. In the evening there will be BBQ and entertainment.

Early morning of September 14th we will leave B́asar and head for Landeyjahöfn harbor, from there we will take a 35min ferry trip to the Westman Islands. We will do a field trip around the island, have lunch, go to a volcanic museum (Pompeii of the North) and have a light dinner before heading back to Reykjavík. Estimated arrival time in Reykjavík is around 22:00.

THURSDAY SEPTEMBER 13TH

- 08:30* Pick up at Askja, University of Iceland
- 10:00 - 11:00* Stop at Seljalandsfoss
- 11:30 - 11:45* Stop at Gígjökull
- 12:30* Estimated arrival at B́asar - Th́orsmörk
- 13:00 - 14:00* Lunch
- 14:00 - 19:00* Hikes (see hiking trails on page 8)
- 19:00* Appetizers and drinks
- 20:00 - 23:00* Barbeque and entertainment

FRIDAY SEPTEMBER 14TH

- 07:00 - 07:45* Breakfast
- 08:00* Departure from B́asar, Th́orsmörk
- 09:45 - 10:20* Ferry to the Westman Islands from Landeyjar-harbor
- 10:30 - 12:00* Sightseeing
- 12:00 - 13:30* Lunch at Einsi Kaldi
- 14:00 - 17:00* Eldheimar museum (Pompeii of the north) and free time to explore the island on foot
- 17:00 - 18:00* Light dinner at Einsi Kaldi
- 18:45 - 19:30* Ferry back from the Westman Islands harbor to Landeyjar-harbor
- 22:00* Estimated arrival in Reykjavík

Equipment list

LUGGAGE

Please bring your luggage for the field trip in two smaller bags since there isn't enough space to store regular suitcases for about 100 people in the hut. One can be left in Reykjavík and stored in a storage room at the University during the field trip. Travel sacks/duffel bags are preferred for the field trip. Laptops should preferably be left in Reykjavík.

CLOTHING

Hiking boots - Good sturdy boots with a robust sole. Preferably waterproof.

Rain and windproof outer wear (jacket and trousers) - Preferably breathable fabric such as Gore Tex or similar.

Warm mid layer - Fleece jacket/wool jumper/primaloft or similar

Wool and fleece for inner wear - Long sleeve top and long johns. Thermal underwear made of wool or synthetics. NO COTTON, silk is OK.

Gloves and/or mittens

Warm hat - Wool or synthetics.

Thick socks, several pairs - For hiking, as well as comfy socks for the evening in the hut.

Slippers - For the hut (optional).

GEAR

Sleeping bag, essential - Light sleeping bag with no specific temperature rating will be sufficient and a **travel pillow** (optional).

Small backpack - For food, drinks and personal belongings for the daytrip.

Flash light/head light

Sunscreen

Sunglasses

Water bottle

Towel

Cash for the optional shower - Gas heated shower 400 ISK, bring coins for the automat

Ear plugs (optional but could come in handy when sleeping in a room with several others).

Hiking poles (optional)

Sea sickness medication - (optional), for the 35min boat trip to the Westman Islands

Thórsmörk



A view of Þórsmörk from ICC 2014. Photo: Sandra Ósk Snæbjörnsdóttir, 2014.

THE WOODS OF THOR

Thórsmörk (Þórsmörk) is situated about 150 km south-east of Reykjavík. It is one of the most beloved natural attractions in Iceland and highly popular for hiking. Thórsmörk, which literally means “the Woods of Thor”, the Nordic God of Thunder, is situated at the edge of the southern highlands. The name properly refers only to a mountain ridge located between the rivers Krossá, Þröngá and Markarfljót but is most commonly used to describe the area between Thórsmörk and Eyjafjallajökull.

CHARACTERISTICS

Thórsmörk is characterized by wide, inland valleys surrounded by glaciers, rugged mountains and unbridged waters. The area offers a wide vegetation of moss, fern, birch wood, and other small shrubs. The mountains surrounding Thórsmörk are mostly made of hyaloclastites; glassy basaltic formations formed during volcanic eruptions under the ice sheet during glaciation, which are highly eroded by rivers and glaciers and cut with small valleys, gullies and dells. Three glaciers surround Thórsmörk and shelter it from harsh weather; Tindafjallajökull in the northwest, Mýrdalsjökull in the east and the famous Eyjafjallajökull in the south. Glacial rivers and streams are common in the area. The largest one, Krossá river is a rather unpredictable and fast streaming glacial river that winds between the mountains. More information about Thórsmörk can be found [here](#).

ACCOMMODATION

The accommodation for the field trip is at Básar Mountain Huts in Goðaland (“Land of the Gods”). Goðaland is situated south of Krossá river in Þórsmörk. Further information about the accommodation at the mountain huts can be found [here](#).

Eyjafjallajökull



Tourists viewing the Fimmvörðuháls eruption on April 1st. Photo: Ólafur Sigurjónsson, from Karlsdóttir S., et al. 2012.

The eruption in Eyjafjallajökull on May 11th 2010, seen from the northwest. In the foreground is the floodplain swept by jökulhlaups in the first two days of the eruption. Photo: Magnús Tumi Guðmundsson, from Karlsdóttir S., et al. 2012.

EYJAFJALLAJÖKULL

Eyjafjallajökull is the 6th biggest glacier in Iceland and one of the highest mountains, 1666m. Under the glacier is a stratovolcano which has erupted at least four times since the Vikings settled in Iceland in 870.

FIMMVÖRÐUHÁLS ERUPTION

On the 20th of March 2010, after 18 years of deformation and earthquake activity, an effusive flank eruption began at the Fimmvörðuháls mountain pass, a 2-km wide ice-free strip of land between the two glaciers Eyjafjallajökull and Mýrdalsjökull ice caps. The Fimmvörðuháls eruption was a typical basaltic fissure eruption. The alkali olivine basalt magma has a relatively high temperature and density. It was a relatively small, basaltic eruption along a short eruptive fissure that produced 20 million m³ of lava covering 1.3 km², with miniscule amounts of tephra. The amount of airborne tephra particles deposited outside of the craters is considered to have been less than 0.1 million m³. The eruption lasted until the 12th of April 2010.

EYJAFJALLAJÖKULL ERUPTION

Only a day and a half passed between the ending of the Fimmvörðuháls eruption and the onset of the summit eruption in the early morning of 14 April. It was preceded by an intense earthquake swarm and began as a brief sub-glacial eruption, followed by an explosive, ash producing eruption that carried on continuously, although at a varying intensity, for 39 days. The total mass erupted is estimated to be

$4.7 \pm 1.2 \cdot 10^{11}$ kg and the bulk tephra volume was about 0.27 km^3 . Major element analysis showed that the magma erupting from the summit was of trachyandesitic (benmoreitic) type.

The main local hazard during the first two days was from flooding, as volcanically generated glacier bursts were repeatedly flooding from the crater area and down the Gígjökull outlet glacier valley at the northern side of Eyjafjallajökull. The sustained nature of the volcanic activity and persistent wind patterns resulted in a larger effect on aviation than any of the previous eruptions in Iceland.

Vestmannaeyjar



*From the first day of eruption on Heimaey.
Photo: Reynir Oddsson from heimaslod.is*



*Birds eye view of the making of a new island,
Surtsey. Photo: Sigurjón Einarsson from
heimaslod.is*

THE WESTMAN ISLANDS

The Westman Islands are located 10 km south of Iceland. There are 15 islands in the archipelago as well as 30 sea pillars and stacks. Heimaey is the biggest island of them all, 13.4 km^2 and the only one that is being inhabited.

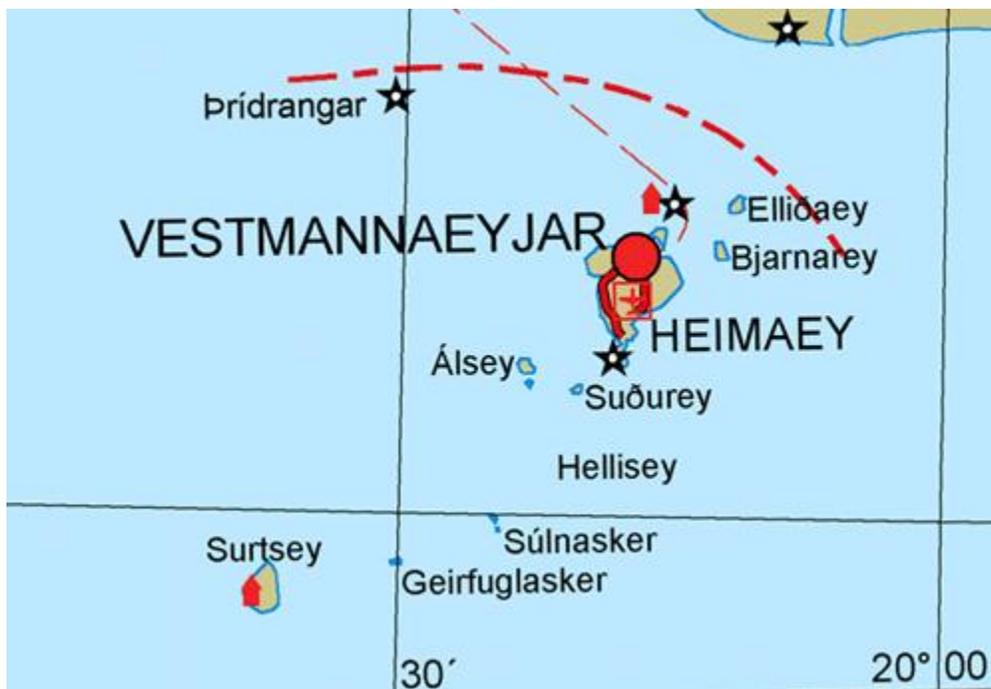
SURTSEY

However, the most famous one is the island, Surtsey. Surtsey was created in a large undersea volcanic eruption in 1963-1967. In fact, there were three islands formed, Surtsey, Syrtlingur and Jólnir, but only one survived the onslaught of the sea. As soon as the eruption stopped, the island was preserved. Geologists and biologists were very curious how life would evolve on the island. Amazingly shortly after the eruption stopped many different organisms became local to the island. Today the island is on the UNESCO world heritage list, and only specific scientists are allowed on the island.

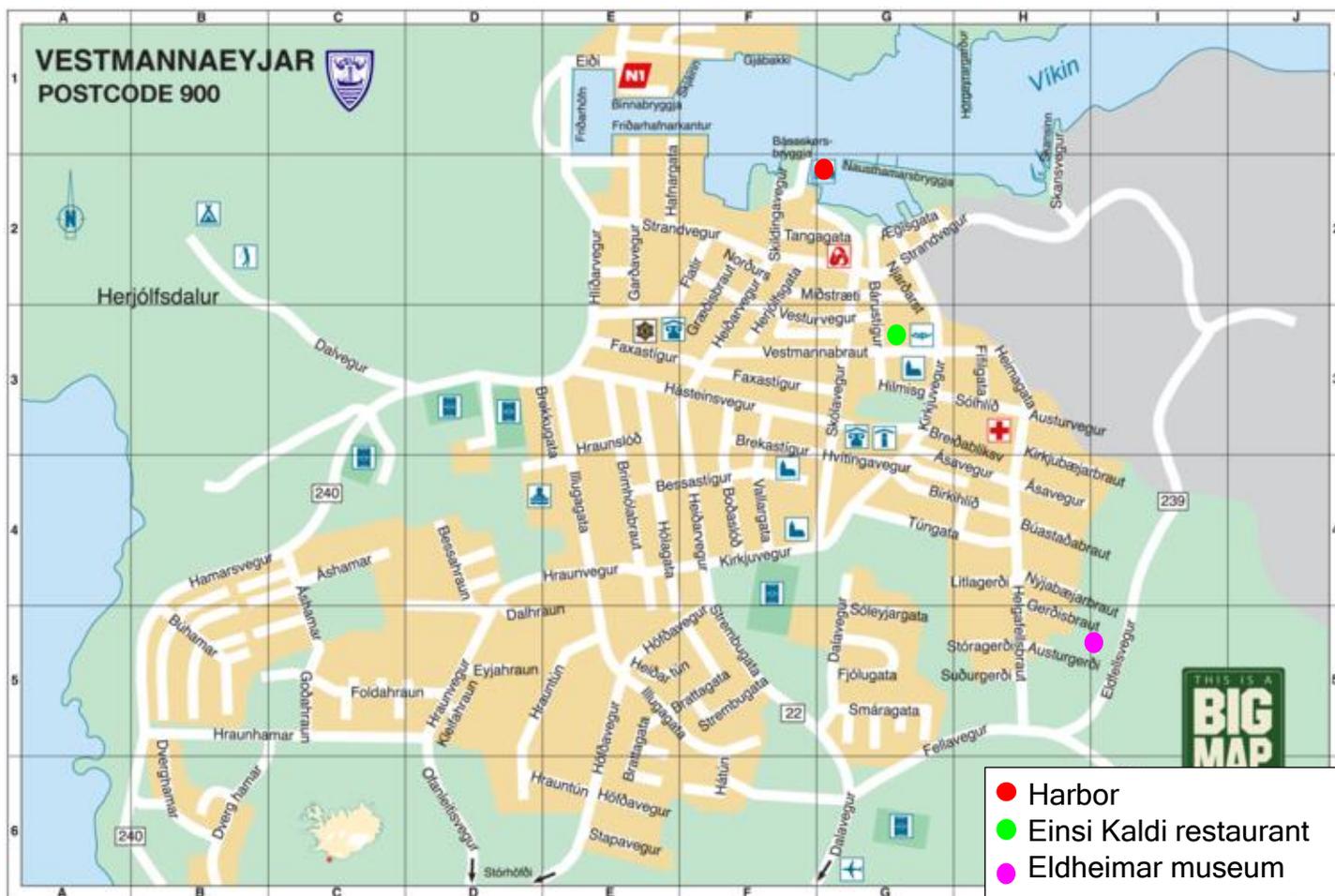
HEIMAHEY ERUPTION

On January 23, 1973 there was another eruption. Now on the main island of Heimaey, 150 m from the town. That night, almost all 5273 inhabitants were safely relocated to mainland Iceland. The eruption lasted over 5 months and in that time the island grew by more than two square kilometers, 300 houses and 11 streets were lost under lava and a new volcano was born, Eldfell.

MAPS OF THE WESTMAN ISLANDS



The Westman Islands

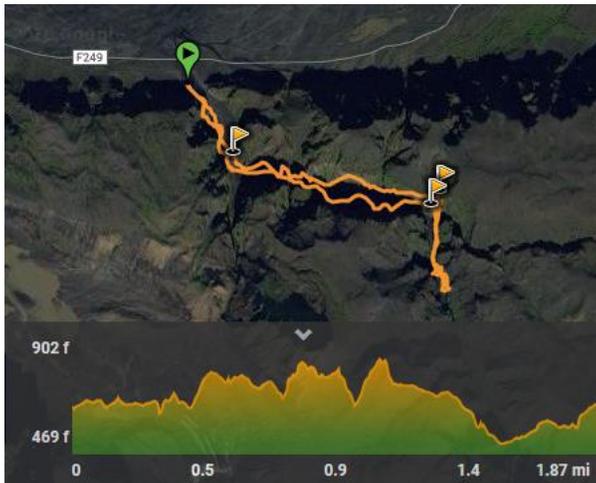


Downtown Heimaey

Hiking Trails

Hikes during September 13th can be classified as Easy, Medium and Hard. Guides will be provided in all the trips but private walks or hikes (without guides) are welcome. The only request is to have a save trip and arrive back to camp before dinner (20:00). Departure time is right after lunch and understandably you can only choose one option.

EASY



Stakkholtsgjá hike. Picture borrowed from [wikiloc](#)

Stakkholtsgjá Canyon

Length: 3km (1.87 miles), elevation: 133m (433ft), duration: 2-3 hours.

As you enter the canyon you will have to skip across a small river and walk along it to the end of the canyon. On your way you will enjoy an impressive view upon the 100-meter high cliffs, towering above your head. The riverbed leads you to a narrow passage, on the left side at the very bottom of the canyon, where you can enter the actual Stakkholtsgjá Ravine itself. Continue up a pile of large boulders to where you can see the river cascade down into the ravine, in a beautiful waterfall. The canyon offers an easy but rewarding hike. Be careful or you might end up with your feet wet when crossing the river and be careful of any falling rocks, from the cliffs above

MEDIUM



Tindfjöll circle hike. Picture from [wikiloc](#)

Tindfjöll circle:

Length: 10.5km (6.61mi), elevation 248m (810ft), duration: 5 hours.

The hike goes from Básar to Langidalur hut, from there through Slyppugil Valley, then you hike across moraine along the side of a ridge. You'll then pass through Tröllakirkja (Troll's church) with its sweeping stone arches. Next you will have a postcard worthy viewpoint to the Þórsmörk valley. Follow the top of the sandstone ridge until you find yourself at the coursing Krossá river, which leads you back to Langidalur hut and Básar.

HARD



Útigönguhöfði mountain hike. Picture from [wikiloc](#)

Útigönguhöfði mountain

Length: 5.6km (3.5mi), elevation 590m (1930ft), duration: 3-4 hours.

The hike goes from Básar, through Básaskarð and Votukletta. From there is a quite steep climb, but the trail is good, and chains are there to help you. When on top you will have stunning views of Eyjafjallajökull, Fimmvörðuháls and Þórsmörk. Útigönguhöfði mountain is suitable for those who are looking for stunning views and don't mind a little physical challenge

Acknowledgements

The trail maps on pages 8-9 are acquired from the hiking site wikiloc (wikiloc.com).

Text about Thórsmörk and Eyjafjallajökull are gotten from Karlsdóttir, S., et al. 2012.

Text about Vestmannaeyjar is gotten from Heimaslóð (heimaslod.is)

Photos are from Sandra Ó. Snæbjörnsdóttir, Reynir Oddsson, Sigurjón Einarsson, Karlsdóttir, S., et al. 2012, wikiloc and google maps.

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