

From Fjallabak



caving into the chamber. On this hypothesis, the mountains of Háalda, Sudurnám, Nordur-Barmur, Torfajökull, Kaldaklofsjökull and Ljósártungur are the remains of the magma chamber's rim.

### Weather

The average annual temperature in the protected areas of the Fjallabak outback is estimated at 0-1°C. July is the warmest month of the year, with average temperatures of 7-8°C. The average temperature in January and February is around

-6°C. The average temperature of individual months is very variable from year to year, and frost is possible at any time of year. In the South-East corner of the reserve, the annual precipitation is 2,000-3,000 mm. Precipitation decreases sharply to the North and North-West, and drops down to 1,000 mm in the northernmost parts.

### Vegetation

Plants grow for, at most, two months per year, and the formation of soil is extremely slow. The lack of fully rotted and weathered materials makes the soil rough and loose; winds and water shift the soil easily, and sandstorms are common. Given this, and the fact that the area has been grazed through the ages, it should come as no surprise that it is sparsely vegetated. Green areas are small and scarce, found mainly in the vicinity of rivers and lakes. The



Cottongrass



Water chestnut

area of Kýlingur is rich in ponds, lakes and various wetland plants. The acidic rhyolite rock is mostly devoid of vegetation, but bright green moss adorns many of the tuff mountains. Approximately 150 species of flowers and ferns have been found in the protected area. Willow is prevalent in dry gravel areas and lava fields, while cottongrass is prevalent in the



Least willow

wetlands. Due to the geothermal heat, the vegetation around Landmannalaugar resembles that of the lowlands. Here you will find water chestnuts and delightful marsh cinquefoils.

### Ancient Resources

In times gone by, more of the resources of the area were utilised than today. People collected Iceland moss and roots, fished for trout and hunted whooper swan. Sheep were, and still are, let loose to graze here from spring until mid September.

### Aquatic Life

The lakes in the Fjallabak outback are cold. They harbour various small animals and trout as well as plants. For as long as men remember, there have been brown trout and Arctic char in lakes Ljótípollur and Frostastadavatn. From circa 1970, Arctic char were released into other lakes in the area, and the stock has grown so much that most of the lakes in the area are seething with small char.

Ljótípollur crater



### Birds

As is common for the Icelandic interior, birdlife here is meagre. Great northern diver lays eggs by lakes Frostastadavatn and



joins Landmannaleid just north of lake Frostastadavatn. Few locations are more sensitive to damage from encroachment. Travellers are requested to enquire about the condition of roads before setting off on their trip and to restrict their driving to roads shown on maps.

### Hiking Routes

The Fjallabak outback has hiking routes at all levels, a few of which are marked in on the map in this brochure. Hikers are asked to keep the following in mind: the

Kirkjufellsvatn. Harlequin duck is occasionally seen by Jökulgilskvísl river and is known to have laid eggs in the area.

### Roads

The ancient settlers' route of Landmannaleid lies between land and Skaftártunga, cutting right through the Fjallabak outback. The reserve is normally entered from the North at Sigalda, on a road that



rock is very loose and all climbing is dangerous. It is best to follow mountain ridges or ravine floors. Streams and rivers are common. Please take special care around



Laugahraun lava fields in Landmannalaugar

In Landmannalaugar



hot springs, and avoid stepping into hot mud and water. As a rule, you should walk around green patches, as they are often wet and are easily trodden out. The temperature can change very rapidly due to wind. Hypothermia is dangerous but easy to avoid by wearing good sweaters and wind-proof jackets. You can walk from Landmannalaugar over to Thórmörk, on a route called Laugavegurinn. The route is mapped, and most of it is staked. Overnight accommodation

Such expeditions in the area of Landmannafrétt have long been perilous. The landscape is harrowing, with expanses of gloomy lava meeting black sand deserts, and the weather is harsh and unpredictable. The awe



is available in hikers' huts in Hrafninnusker, by Álftavatn lake and in Emstur. Accommodation in these huts needs to be booked in advance.

### Sheep farming

In Iceland, sheep are set loose to graze in the mountains over the summer months, with search expeditions setting out to gather them back in autumn.

was compounded by fear of the unknown, of hidden people, trolls and outlaws. Search parties did not enter Jökulgil gorge in search of sheep until after 1850, for fear of outlaws. The chief resting places are found at Landmannahellir cave and in Landmannalaugar. The cave is said to have held up to 70 horses, while a small hut nestled under the rock slept four men. Others slept in tents around the cave. Since 1907, there has



At Hrafninnusker

At Hrafninnuhraun lava fields



been an emergency shelter at Landmannahellir cave.

The Landmannalaugar pools have long been a sanctuary for search parties. There was enough grass here to bait 30 horses for up to three days, and the "laugakaffi" – coffee made with hot spring water – was thought to have healing powers in addition to being exceptionally tasty. The hut by the stream in Laugar is thought to be very old indeed.

### Huts and Camping

The protected area has campsites in Landmannalaugar, Landmannahellir and Hrafninnusker. There are also hiking huts in Landmannalaugar, Hrafninnusker and Landmannahellir. There is a caretaker in all huts over the summer months.

### Fjallabak Nature Reserve

Fjallabak was designated a nature reserve by a directive in 1979. The reserve reaches over 47 thousand hectares and stands at 500 metres above sea level at its lowest points. The purpose of protecting the area is to preserve it for the enjoyment of many future generations.

Guests are kindly asked to respect the rules of conduct and to do their bit to ensure that both present and future generations get the most out of the area.

### Enjoy Your Stay!

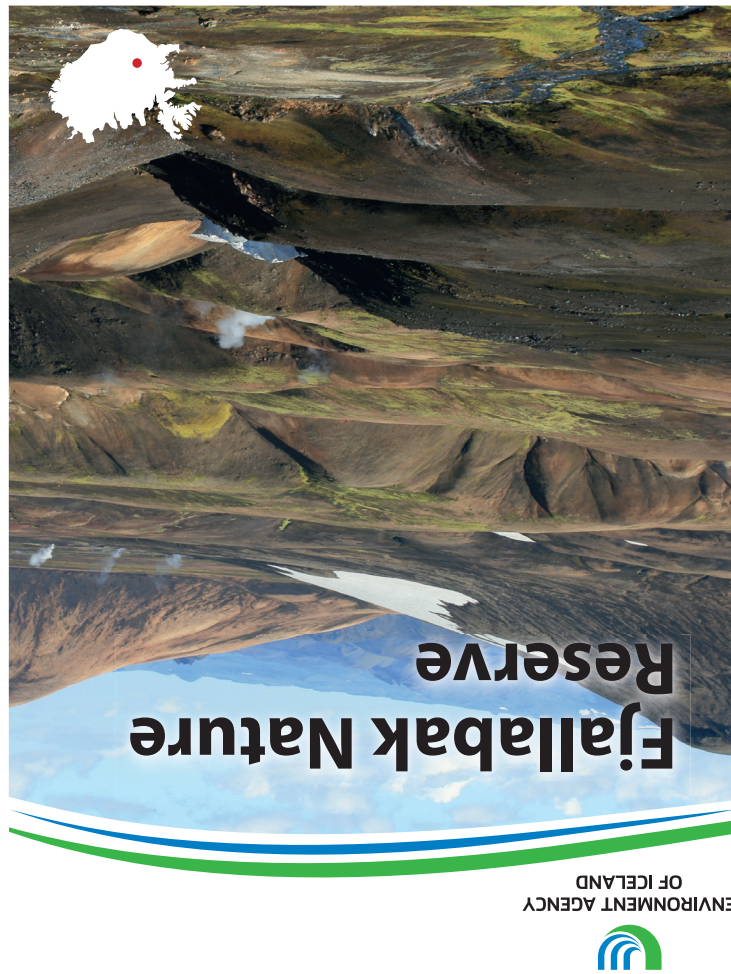


#### Rules of Conduct:

- Do not drive off roads
- Do not spoil or destroy vegetation
- Do not interrupt wildlife
- Do not light campfires
- Dispose of all rubbish in rubbish bins
- Do not build cairns
- Do not write on natural formations
- Do not spoil hot springs and pools
- Do not camp outside designated camp grounds unless you have secured a special permission
- Do not disturb the peace and quiet of the outback unnecessarily

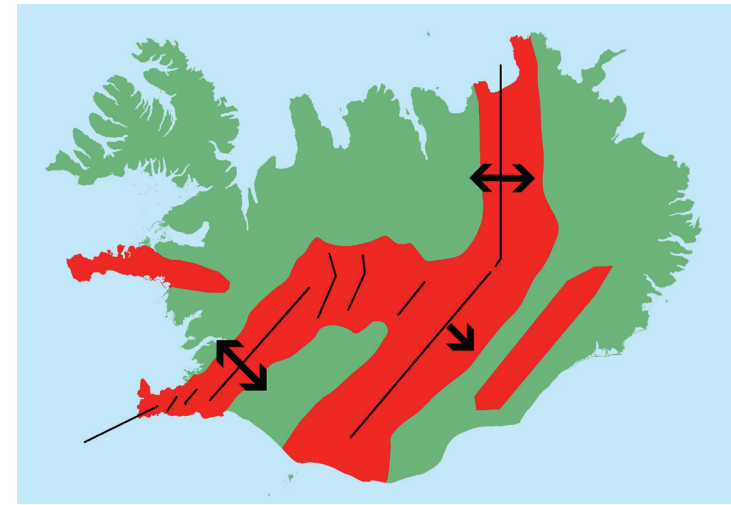


The hut of Iceland Touring Association in Landmannalaugar



Text: Ólafur Jónsson. Map made by Jón Orvar Geirsson in accordance with data from the National Land Survey of Iceland. Drawings: Jón Baldur Hlíðberg Photographs: Ólafur Jónsson, Snævarr Guðmundsson and Kristín S. Jónsdóttir. Design: Ingi Rafn Ólafsson Printing: Guðjón Ó printing  
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Plate tectonics in Iceland



### Geology

Along the Mid-Atlantic rift that splits the country from South-West to North-East, two of Earth's tectonic plates are slowly pulling apart. The gap between them is filled by basalt magma that flows up from the Earth's mantle to form new land. The bedrock of the Fjallabak outback was formed some 8-10 million years ago along the North American plate. Volcanic activity restarted in the area around two million years

ago, triggered by a southward drift of the Eurasian plate. Hot basalt magma forces its way south, melts the Earth's crust and blends in with it in various proportions. Mixed rock of this sort is found, for instance, in the lava fields of Laugahraun, Námshraun, Dómadalshraun and Hrafninnuhraun. There was much volcanic activity in the area in the last glacial period of the ice age, creating the tuff mountains Lödmundur and Mógilshöfðar, as well as the rhyolite mountains Bláhnúkur, Brennisteinsalda and Kirkjufell. Rhyolite lava from the

last inter-glacial period of the ice age can be found under Nordur-Barmur and in Brandsgil gorge. The last eruptions in this area were in the 15<sup>th</sup> century, North-East of Landmannalaugar. These eruptions resulted in the formation of lakes Veidivötn and Ljótipollur, of lava fields Námshraun and Nordurnámshraun and of much of the black sand that covers the northern parts of the nature reserve. The area surrounding Torfajökull glacier contains the country's largest expanse of

rhyolite. When cooled abruptly, rhyolite magma turns into shiny black volcanic glass (obsidian). Otherwise, rhyolite normally comes in grey, yellow, pink or green. As testified by the numerous pools and hot springs found here, the Torfajökull area is one of the country's main geothermal areas. It is classified as an active central volcano. Some geologists believe that there was once an enormous volcano here sitting on a magma chamber underneath, and that a drop in the chamber's pressure resulted in the volcano's top

### Map key

<b>Hiking routes</b>	<b>Huts</b>
<b>Easy</b> - Generally smooth paths, without any obstacles to speak of.	<b>River crossings</b>
<b>Demanding</b> - Longer or shorter rough and difficult stretches such as unbridged streams, loose gravel, uneven terrain, etc.	<b>Roads</b>
<b>Difficult</b> - Obstacles and difficulties such as unbridged rivers and steep terrain. Can be dangerous in poor conditions for the inexperienced.	<b>mountain road</b>
	<b>track</b>
	<b>*1</b> foggy area, route finding difficult
	<b>*2</b> chances of dangerous snow bridges
	<b>Fjallabak reserve border</b>

