

Langjökull Glacier and the southern interior desert.

Trip leaders: Dr. **Olafur Arnalds** (AUI), Dr. **Tómas Grétar Gunnarsson** (University of Iceland) and Dr. **Lilja Jóhannesdóttir** (South East Iceland Nature Research Center).

The trip will take participants through the southern lowlands, which is an important agricultural area. The South is covered by fertile Andosols, including extensive wetlands that have largely been drained for agricultural purposes. We will cross the huge Lake Thingvellir rift valley and the old parliamentary site (UNESCO World Heritage area), but not stop there. Participants will enter the southern highland desert area (human-induced desertification in a humid climate) and approach the margin of the vast Langjökull glacier. Large-scale revegetation will be observed, afforestation efforts and controversial use of invasive introduced species. Natural and human history, and volcanology will be discussed along the route.

There will be three busses. **There are four major stops but the order of the stops will differ between busses** to avoid overcrowding. Plan on toilet stops going in and out of the desert area, limited such facilities at Hagavatn. NOTE: The track from the main-road to Sandy Hills and Hagavatn is very rough! Expect some bouncing in the bus! 45-60 min each way from the mainroad.

1. Sandy Hills. 30-45 minutes. Vegetation remnants in a vast desert environment. 300 m walk on soft ground. Volcanic soils and tephra from large volcanic eruptions. An area of major wood harvesting during the Middle Ages, followed by massive desertification. May find old charcoals. What is a desert? The tragedy of the commons. Land use issues, controversial use of introduced species vs assisted secondary succession for restoration purposes.

2. Hagavatn – Langjökull Glacier. Approx. 2 hrs. A hike from the mountain hut to Lake Hagavatn, with a good view (weather permitting) of the rapidly retreating Langjökull Glacier, which is one of Iceland's main glaciers. Hike up rough 4x4 track. 30-40 min each way. An astounding mountainous desert/glacier environment. Stay on the track! The steeper slopes have loose gravel on harder surface: be careful, especially going down the track! **Total of 4.5 km / 3 mile hike**, up 120 m hill. Some rough toilet facilities if needed. **LUNCH HERE.** Note that the busses arrive here at different times. ISCS and AUI people provide assistance and answer questions (are in a separate car). Shark and Black Death refreshments (☺) if the mood is bleak.

3. Geysir Hot Spring Area. Approx. 30 min. This is the site of the original Geysir hot spring. Toilet facilities (free of charge) in the store. Busy tourist place. Very nice hot springs and one erupts at about 8 minute intervals. Please don't be late back to the bus.

4. The Golden Waterfall (Gullfoss). Approx 40 min. We will leave you at the lower terrace and you will walk up to the store/restaurant/toilet parking lot. Toilets are 200 kr (can use credit card), but free if you buy something in the restaurant. The waterfall is in the Hvítá River (White River), one of the major glacial rivers originating from the highland glaciers. Busy tourist place.

The route back will take us through the center of the Southern Lowlands, beautiful wetlands with rich bird life, but mostly drained for agriculture (hay making). Will pass the Skálholt Cathedral site. Multiple land uses, including thousands of summer houses, mainly in birch shrublands. Afforestation of large proportions. Will see active green-house industry villages and large thermal-electricity facilities (but no stops there). Return to Reykjavik: 6-7 but later if unforeseen delays.

