

A Second Species of Vascular Plants

Discovered in Surtsey

by

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The second attempt of higher plants to invade Surtsey, took place during the summer of 1966.

On July 2nd four seedlings of Sea Lyme Grass, Elymus arenarius, as well as a seedling of Sea Rocket, Cakile edentula, were found growing on the sandy shore on the northern side of the island.

The plants grew from seeds, which had apparently dispersed by ocean as they were all found growing in a row at the hightide line. As these species are not found growing anywhere closer to the new island than on the island of Heimaey, their minimal distance of dispersal must have been 20 km (Johnsen 1937, Fridriksson and Johnsen 1966). During this ocean travel the seed has kept its germination ability.

The first individuals of vascular plants to start growth on the island were of the species Cakile edentula. These were later buried under tephra from the volcano Syrtlingur as previously reported on: (Fridriksson 1965). The plants starting growth in 1966 were also wiped out, this time by ocean waves. Seeds and various other parts of Elymus had been discovered earlier in the debris washed ashore on Surtsey (Einarsson 1965, Fridriksson 1966).

In table I there is an additional list of various plant parts found drifted upon the beach of Surtsey during August and September 1966. Among these were 10 seed of Cakile edentula, which proved germinable when tested.

TABLE I

Species and parts of vascular plants recorded drifted ashore in Surtsey

Species	Aug. 13th-66	Aug. 14th-66	Aug. 15th-66	Aug. 17th-66	Sept. 7th-66
<i>Agrostis tenuis</i>	A green culm with panicle		A culm with panicle	One culm with panicle	
<i>Anthoxantum odoratum</i>					
<i>Betula</i> species		Twigs			
<i>Cakile edentula</i>			Green stems & several pods with 10 matured seed		
<i>Elymus arenarius</i>	8 old culms and green panicle	Old culms & stolons 2 seed unmatu- red		Several old culms with panicles	
<i>Ericaceae</i> sp.			Twigs		
<i>Festuca rubra</i>	Green leaves and culms	Green leaves and culms		One panicle	Leaves & culms
<i>Juncus balticus</i>		A culm with panicle			
<i>Matricaria maritima</i>	A green rosett of leaves with root				A green stem with leaves
<i>Poa pratensis</i>			Culms with panicles		
<i>Puccinella maritima</i>			Culm with panicle		
<i>Rumex acetosa</i>		A green stem			
<i>Scriptus caespitosus</i>	A culm with panicle				
<i>Trifolium repens</i>			One head		

References

- Einarsson, E. 1965. Report on dispersal of plants to Surtsey. The Surtsey Biology Conference.
- Fridriksson, S. 1965. The first species of higher plants in Surtsey, the new volcanic island. Náttúrufræðingurinn, 35 p. 97-102.
- Fridriksson, S. 1966. The possible oceanic dispersal of seed and other plant parts to Surtsey. Surtsey Research Progress Report II p. 59-62.
- Fridriksson, S. and Johnsen, Björn 1966. Preliminary report on the vascular flora of the lesser Westman Islands. Surtsey Research Progress Report II p. 45-58.
- Johnsen, Baldur 1937. Observations on the vegetation of the Westman Islands. Societas Scientiarum Islandica, Vol. XXII.