

On Dispersal of Plants to Surtsey

by

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In a previous report on this same subject (Einarsson 1965) it was reported that one panicle of Alopecurus pratensis L. and another panicle of Anthoxanthum odoratum L., each of the panicles containing some few seeds, had been collected on the shore east of the lagoon on Surtsey for testing the germination ability of the seeds. There were about 30 seeds in the panicle belonging to the former species, but only 4 in the panicle belonging to the latter one.

The germination ability of these seeds has now been tested and none of them did germinate although they seemed to be fully ripe. Therefore the conclusion must be that the seeds have probably been injured by the salt sea water and lost their germination ability.

The present author made two trips to Surtsey in 1965, the first one on March 19th and the second one on April 4th.

March 19th.

During this visit to Surtsey the author was accompanied by Mr. Sigurdur Hallsson and the main purpose was to search for plants or parts of plants on the lava shores of the west, south and southeast coasts of the island. No macroscopic plants or plant parts were found at all in these parts of the island. Some samples of rock pieces were collected from the surface of the lava and brought to Reykjavik for microscopic studies, but no sign of any plants were found on these rock pieces. Some few samples of sand were also collected from the narrow sand strip

in front of the lava on the shore and from holes and fissures in the lava. In one of the samples from a small and shallow hole in the lava a fragment of a pennate diatom frustule was found.

Macroscopic plant parts were also searched for on the east coast between the lava and the lagoon. At the high tide mark the following plant parts were found drifted ashore:

Cakile edentula (Bigel.) Hook. 24 seeds

Angelica archangelica L. 4 seeds

The viability of these seeds was tested and the results were as follows:

Cakile edentula (Bigel.) Hook. 15 seeds turned out to be alive and able to germinate.

Angelica archangelica L. All 6 seeds did not germinate.

Some fragments of macroscopic algae, mostly Ascophyllum nodosum (L.) Le. Jol., were also found on the shore at the same place.

#### April 4th.

During this visit to Surtsey macroscopic plants and parts of plants were mainly searched for on the east, northeast and north coast of the island. Somewhat above the high tide mark west of the northern end of the lagoon heaps of dead algae, mostly Ascophyllum nodosum (L.) Le. Jol., had been formed by the surf and partly covered by sand. These algae heaps seemed to be excellent habitat for microorganisms as long as it was not quite covered by sand.

East and south of the lagoon parts of the following plants were found drifted ashore.

#### Vascular plants:

Cochlearia officinalis L. Some few small and fresh green basal leaves.

Matricaria maritima L. 20-30 small fresh green basal leaves.

Poa pratensis L. Some 30 fresh green leaves, some of them with ligules and sheaths.

Algae:

Ascophyllum nodosum (L.) Le. Jol. Some 30 thallus fragments, one of them with an epiphytic growing Ectocarpus sp.

Fucus inflatus L. and Fucus vesiculosus L. Some few thallus fragments of each species.

Enteromorpha sp. 2 thallus fragments.

Literature

Einarsson, E. 1965: Report on Dispersal of Plants to Surtsey.  
Surtsey Research Progress Report I, Reykjavik.