

A preliminary report on studies of
microorganism on Surtsey

by

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Studies of microorganism on Surtsey were performed during July to Sept. 1965 and July to August 1966 in the continuation of the investigation already started in 1964. (The proceedings for the Surtsey biological conference May 27th-29th 1965).

The aim of the studies was to estimate the relative quantity of microorganism in the air, on the surface of the tephra as well as in the lagoon on the north side of the island. This was partly compared with the conditions on the most recent volcanic island "Jólnir" as well as on Heimaey, the largest of the older islands in the group, and the only populated one.

Methods used for collecting the microorganism from the air were the same as described in the previous report, using the following culture media on petri dishes: Nutrient agar, Blood agar, McConkey media as well as Sabouraud media. As in the previous studies the Petri dishes were put on 50 cm high wooden poles at several places on the island. Similar weather conditions were selected for all these studies, cloudy weather and dry but without sunshine, moderate wind or calm.

Samples of tephra were collected from the surface at various elevations for cultures of saprophytic bacteria.

Special samples were collected on August 18th, 1966:

- a) from deposits of sulphur, bordering fissures in the lava where temperatures of 60° to 105°C were recorded
- b) from a mixture of ash and reddish cinder which appeared to contain oxidized iron and where temperatures of 60°C were recorded.

Both these last mentioned samples were from sites close to the old crater.

These samples were collected for an investigation of autotrophic bacteria. They were sent to Prof. W. Schwartz who conducted the studies at the Florida State University, Tallahassee, U.S.A.

In general the results of these studies indicated that the air close above Surtsey contained only a few microorganism compared with that of the populated island in the neighbourhood. The surface of the tephra, well above sea level, seemed to be free from saprophytic bacteria, but is contaminated in the splashing zone. The investigation for autotrophic bacteria, as reported by Dr. Schwartz, showed at present no indication of that type of organism in the material collected.

A more detailed presentation of these studies is being prepared and will be presented later.