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CONTINUOUS PLANKTON RECORDER SURVEY
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Route Z: Iceland to North America.

As part of the extended programme of sampling in the Atlantic, this route was begun, as a trial, in May 1959.

For the first few months, in order to investigate the practical problems, the route was sampled for a distance of about 900 miles from Iceland.

In September 1959, the route was established as part of the normal recorder Survey, sampling from Iceland to Newfoundland. The maximum number of tows in one year will be 8 or 9 (depending on the ships' time tables). Minor defects to Recorders, and bad weather, have resulted in a few gaps in the Records but suitably modified Recorders are now in use and these difficulties are unlikely to be serious in the future.

The records taken since June 1959 are shown in the attached figure; information for the tow in April 1960 has not yet reached the laboratory. In addition to these records, others were obtained from Weather Ships to the south and south-west of Iceland, crossing the Z route shown here.

The Recorder survey of the North Sea and north eastern Atlantic is expected to yield about 55,000 miles of sampling in a full year, to which should now be added about 11,000 miles from the Z route. Although it does not sample in the ICNAF area, an important regular route (V) was established, beginning in January 1960, between Iceland and Scotland (from M. V. GULLFOSS). In addition to the normal monthly records on this route, extra sampling is being carried out for the staff of the Icelandic Fisheries Research Laboratory who hope to use the material in their study of herring larvae off the south-west coast of Iceland.

The material obtained from the Z route is now being examined with a view to preparing a short preliminary account of the plankton between Iceland and Newfoundland. The first impression is that at this depth of 10 m, both phyto- and zooplankton were at least as abundant (and frequently much more abundant) over the deep oceanic parts of the record as they were over the Icelandic Shelf and in the Atlantic nearer the British Isles which we have studied during the last 13 years. An interesting discovery was a patch of Sebastes marinus due south of Greenland (just inside the ICNAF area) in July 1959; they were much larger (18 to 25 mm) than the specimens we have found each year to the south of Iceland (6 to 15 mm). It seems likely that the Z route may help to establish whether there are separate populations of Sebastes in the area.

Euphausiids and Calanus finmarchicus have frequently been very abundant in the mid-ocean parts of the route. In September, in the centre of the ICNAF area, Calanus reached higher numbers than we have previously encountered in Recorder collections although similar numbers have occurred rarely in the Norwegian Sea.

Calanus glacialis was sometimes present near the Newfoundland coast; the material is being examined to discover the proportion of C. glacialis to C. finmarchicus.