

Administrative report

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Distant Northern Seas Committee  
 1954

by A. VEDEL TANING

During 1954 the following research vessels of the member countries have operated in the distant northern seas (comprising the areas of the previous sub-committees for the north-eastern area and the north-western area):

Belgium: none.	Denmark: "Dana", "Adolf Jensen!"
England: "Ernest" (see below).	
France: none (see below).	
Iceland: "María Sars", "Johan Hjort",	
Netherlands: none.	
Scotland: "Scotia", "Thor Iversen!"	

- Freiraum für Scan anlegen
- Textfeld einfügen
- gescannte Grafik einfügen
- kein Rand

Moreover observations were collected by several chartered vessels, fishery inspection vessels, from France the frigate "Aventure" and the inspection vessel "Ailette", from Norway the inspection vessel "Thetis", the commercial vessels "Immanuel", "Gjogvarenn" and "Akranes", from Germany the inspection vessel "Meerkatze" and trawlers "Fr. Busse", "Hans Böckler" and "Bremen".

Observations are published in the "Bulletin Hydrographique", "Annales" and in national publications.

The administrative reports of the special committees on hydrography, plankton, cod, herring, salmon and trout, and shellfish give some information not included in this report.

Denmark
Faroe waters and the Northern Atlantic (A. Vedel Taning).

The research vessel "Dana" worked about 138 stations in the Faroe-Shetland channel, around the Faroes, north of the Faroes and east of Iceland, in the area between Faroes and East Greenland and the Labrador Sea during June and the first week of July; on the return voyage from work in West Greenland waters (see below) the vessel operated a section from Cape Farewell to the English Channel.

Hydrographic observations and plankton samples were taken on most stations operated by the "Dana" (stramin net, Hensen net and plankton indicator were used). The standard section over the Faroe-Shetland channel was operated as usual.

In the Faroe area nateruak was obtained by "Dana" especially for quantitative studies on the occurrence of fry of cod and haddock; moreover trawling experiments with a 50' otter-trawl were carried out in various localities. Material for age assessment of cod was, however,

collected in the Farce area mainly from commercial vessels and commercial catches. 4272 cod were measured etc., and of these about 2050 otoliths were taken.

A total of 526 cod were tagged round the islands, especially from the motorcutter "Akranes", and the motorboat "Gjövarenni".

During April and first part of May the Hensen net was used for determination of the spawning areas of cod and haddock.

Herring research work was carried out during June particularly north of the Farces and east of Iceland in collaboration with the Icelandic and the Norwegian research vessels (see the reports of the Herring Committee and the Hydrographic Committee); during this work zooplankton and phytoplankton samples were taken. During December 1953 and January 1954 experimental herring fishing (with floating trawl) was carried out north-east of the Faroes to West Norway; hydrographical and biological samples were obtained during these experiments.

The section from the Faroes to the East Greenland along 62° N.Lat. was worked about 1<sup>st</sup> of July, and hydrographic observations as well as zooplankton samples were taken. The similar observations were taken in September on the section from Cape Farewell to the English Channel.

#### West Greenland Waters (Paul M. Hansen)

Offshore work: The "Dana" operated in West Greenland waters from 7. July to 22. August. The "Adolf Jensen" worked occasionally on the banks April-August.

Hydrographic observations were taken chiefly on eight sections off West Greenland on 72 stations, temperature measurements with the bathythermograph at 32 stations.

Plankton: Pelagic hauls with the 2 m stramin net were made at 63 stations, vertical hauls with the Hensen net were carried out at 33 stations.

Productivity: Observations on productivity (by the C(14) method) were taken on 26 stations.

#### Coastal waters and Fjords.

The "Adolf Jensen" has carried out work during the whole year in the area between about 60°N.L. to about 68°N.L.

In Julianehab district the "Immanuel" has continued the work was started in 1953 up to the middle of August.

On the field laboratory in Godthab part of the material collected by the "Adolf Jensen" has been examined.

Plankton: Polagic hauls with 1 m stramin nets were taken on different stations in the fjords, the coastal waters and on the banks during the whole year.

In Godthab and Julianehab districts pelagic hauls were worked together with vertical hauls with the Hensen not regularly on fixed stations.

Cod: see Administrative Report from the Cod Committee.

Herring: Fishing experiments with nets and seine have been carried out in Julianehab district.

Samples of otoliths and scales together with measurements have been obtained. 256 herrings have been tagged with plastic tags fixed by spun nylon.

Salmon and Char: Electro fishing for salmon and char has been carried out in different rivers in south-West Greenland for stock analysis. Samples of about 250 salmon scales and 650 otoliths of char have been collected for age analysis and growth investigations.

137 small salmon and 807 char have been tagged with plastic tags and hydrostatic tags.

Greenland Halibut: Fishing experiments have been made in Godthab and Lichtenau Fjord. A small number of Greenland halibut has been tagged.

Deep-Sea Prawns (*Pandalus borealis*): Fishing experiments with shrimp trawl and collecting of material for biological investigations have been continued.

Seals: Samples of seal teeth together with measurements have been collected from different places along the coast. About 1000 teeth of harp seals and 75 of grey seals have been determined for age.

Redfish: Measurements and weights have been obtained from catches by trawl, long-lines and hand-lines.

England  
(G. C. Trout).

During 1954, seven cruises to the Barents Sea were carried out by the "Ernest Holt". The first completed a winter survey of bottom temperatures, begun in the previous December. The area finally covered stretched from Bear Island Bank to Novaya Zemlya and south of 75°N to the Murmansk and north Norwegian coasts.

The remaining six cruises were designed to cover the distribution of the cod on the Spitsbergen Bank. Incidental to this study, 3.000 Lea tagged cod were released at widely scattered points from West-Spitsbergen to Persey's Plateau in the east. This was the "Ernest Holt"'s part of a joint programme, planned with the "G.O. Sars" to release 5.000 tagged cod distributed as widely as possible over the Barents Sea cod population, in order to obtain mortality estimates.

The West Bear Island Hydrographic Section was carried out in March, June, October and December, and plankton samples were taken simultaneously with hydrographic observations, whilst direct measurements of current flow were made during two cruises (October and December) using different methods.

Finland  
(G. Granqvist).

No work at sea carried out in the area.

France  
(Institut des Pêches).

Hydrographical observations were taken by the inspection vessel « Ailette » in the Norwegian Sea and by the frigate « Aventure » in Greenland waters.



Germany  
(J. Lundbeck)

Market measurements on landings of the following species of fish were obtained from distant northern seas during 1954 by the "Institut für Seefischerei":

Area:	Species:				
	Cod	Haddock	Coalfish	Blue Ling	Redfish
Barents Sea	2610	3267	-	-	-
Bear Island Deep	848	-	-	-	265
Norwegian Coast	9475	4566	-	-	181
Faroos	69	-	-	1080	647
Iceland	9257	-	-	-	-
West Greenland	328	-	-	-	-
<b>T o t a l:</b>	<b>22587</b>			<b>0</b>	<b>1093</b>
<b>Comprising:</b>					
Otoliths:	5944	2408	-	-	-
Individual weightings:	5047	-	-	-	-
Morphological measurements:	1550	-	-	-	-

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Work at sea: occasional investigations have been made by scientific observers on two trips to Iceland, viz.: 1) Fishery protection vessel "Meerkatze", 25. March - 9. May, 1954 (1514 length and 60 morphological measurements on cod, additional observations on stomach contents, maturity, hydrography); 2) commercial trawler "Fr. Busse", 8.-29. August, 1954 (374 length measurements on cod).

The "Biologische Anstalt Helgoland" carried out the following sampling from commercial catches in the fishmarket of Bremerhaven and on board trawlers operating in Icelandic waters:

A. Sampling in the Fishmarket of Bremerhaven:-

1. Measurements:	Iceland/Faroos	Greenland	NE-Area	T o t a l
Redfish	15,499	213	12,019	27,731
Saithe	16,028	-	7,008	23,036
Cod	207	330	-	537
<b>T o t a l:</b>	<b>31,734</b>	<b>543</b>	<b>19,027</b>	<b>51,304</b>
<b>2. Otoliths:</b>				
Redfish	1,740	107	1,568	3,415
Saithe	16,028	-	7,008	23,036
<b>T o t a l:</b>	<b>17,768</b>	<b>107</b>	<b>8,576</b>	<b>26,451</b>

A. Researches at sea:

1. 15. February to 8. March 1954, cruise by Dr. U. Schmidt on trawler "Hans Boeckler" to SW. Iceland (Westmann Isles). On this cruise 3158 saithe were studied (2157 measurements, 1010 measurements, maturity determinations and otoliths secured).
2. 12. October to 3. November, cruise by Dr. U. Schmidt on trawler "Bremen" round Iceland. 1600 saithe were studied as to length, age and maturity.

Iceland  
(Jón Jónsson).

Work at sea: Four cruises were made with the research vessel "María Júlía" in Faxa Bay, where experimental trawling was carried out on two selected stations. During these cruises cod, haddock, and plaice were tagged and these and other species were otolithed and measured for stock analyses.

Hydrography. See report of the Hydrographical Committee.

Plankton. In connexion with the herring researches plankton samples from 687 stations were taken with the Hensen net.

Herring. See the report of the Herring Committee.

Cod. For stock analysis 13.645 otoliths were collected and about 30.000 length measurements were made. 1641 cod were tagged with three kind of tags. In West Greenland waters there were collected 837 otoliths of trawler-caught cod for age determination.

Haddock. 2159 haddock were otolithed and 19.714 measured. 1600 were tagged.

Plaice. 1404 plaice were otolithed and 2191 were tagged.

Other fish. The following species were otolithed and/or measured: - whiting, dab, halibut, common skate, starry ray, coalfish, catfish, redfish, lumpsucker, lemon, sole, and some few other species.

Ireland  
(A.E.J. Went).

No work at sea carried out in the area.

Netherlands  
(B. Havinga).

No work at sea carried out in the area.

Norway  
(Finn Devold).

For information on gadoid fish, herring, hydrography and plankton, see the special committees. Of other researches carried out in the area the following should be mentioned:

Catfish (*Anarrhichas/minor*). Biological sampling and marking was carried out during two cruises with the "G.O. Sars" to northern Norway and the Barents Sea area: 3. March – 13. April and 16. September – 3. November. During the seasonal fishery for catfish off northern Norway in May-June a trip was made to the Bear Island Banks with "Thor Iversen" and to the North Cape Bank with a commercial fishing vessel, both for the purpose of biological sampling and marking. A short report on the results of the last years marking experiments on catfish has been prepared to the Annales Biologiques.

Redfish (Sebastes marinus). Some work has been carried out on the general problem of the age determination of redfish by the help of scales and otoliths. Sampling on a small scale was continued during the above mentioned cruises to the Barents Sea. Our work on redfish will be extended in the coming years.

Scotland  
(B.B. Rae).

During 1954, six cruises by the Scottish research vessel "Scotia" were planned in the old North-Western area. Nothing was attempted in the old North-Eastern area. The dates and itineraries of these cruises were as follows:

- |                          |  |
|--------------------------|--|
| 21. February - 4. March: | Butt of Lewis, Faroe Bank, Faroe, Shetland.  |
| 10. - 28. April:         | Butt of Lewis, Faroe Bank, Emiberg Line, Faroe, Shetland.  |
| 12. May - 19. June:      | Butt of Lewis, Rockall Bank, Reykjanes, Denmark Strait, East Greenland, Faxe Bay, South Iceland, Faroe, Butt of Lewis. |
| 5. - 24. July:           | North Orkney, Faroe, North West Faroe, Butt of Lewis, Lousy Bank, Barra Head.  |
| 9. - 29. October:        | Butt of Lewis, Faroe Bank, Faroe, Shetland.  |
| 2. - 15. December:       | Butt of Lewis, Faroe Bank, Faroe, Shetland.  |

Bad weather prevailed throughout the year with the result that scientific work was often curtailed, and on the first and sixth cruises three or four stations only of the regular hydrographic lines were completed. Temperature and salinity observations were made at all stations on the cruises and investigations on the oxygen, phosphate and chlorophyll content of the water were carried out at selected positions. An extensive report on water flow through the Faroe Shetland Channel has been completed.

Plankton collections were made on all cruises where weather conditions permitted. Particular attention was paid to searching for halibut eggs on the Iceland-Greenland grounds although with little success. The continuous plankton recorder was brought into use on the fourth cruise but once again conditions were unfavourable for its success.

Owing to weather conditions and to the priority of other claims of the work trawling at Faroe was confined to two hauls during the year. None was carried out at Iceland on this occasion.

Sampling of haddock and chicken halibut catches by commercial vessels at Faroe was continued on the Aberdeen fish market.

The results of these investigations will appear under their appropriate headings in Annales Biologiques vol. XI or in other publications.

Publications, other than those published in the Council's series:-

- McIntyre, A.D.: "A note on market sampling of halibut" World Fish Trade, 48, 5, 1954.  
Rae, B.B.: "The occurrence of lemon sole larvae in the Scottish plankton collections of 1929, 1930 and 1931." Mar. Res. Scot., No.1, 1953.  
Rae, B.B. & Wilson, E.: "Rare and exotic fishes recorded in Scotland during 1952." Scot. Nat., 55, 14, 1954.