Semal No. 60

1 · · · · ·

INTERNATIONAL COMMISSION FOR



THE NORTHWEST ATLANTIC FISHERIES

ICNAF Meet. Doc. 52/18

SECOND REPORT OF COMMITTEE ON RESEARCH AND STATISTICS

The Committee, having met in two additional half-day sessions, agreed to recommend to the Commission as follows:

- 12. That the Commission adopt the statistical areas defined in the attached "Report to the Committee on Research and Statistics by the Sub-Committee on Division of Commission Sub-Areas" as a tentative framework for the compilation of statistics, and review, at the time of the next annual meeting, the suitability of the areas and the progress in their use. (Minute 20).
- 13. That the special committee on the Commission's research program consist of scientists only, one or two from each Government, elect its own chairman, and obtain additional advice or assistance as required. (Minute 21).
- 14. That this special committee meet at Copenhagen on the Friday and Saturday immediately preceding the 1952 ICES meeting, and that it also meet immediately before the next annual meeting of the Commission, with one or two intervening meetings if required. (Minute 21).
- 15. That Dr. Taning, Dr. Walford and Dr. Needler be asked to bring together, as a basis for discussions by the special committee at its first meeting, a listing of proposed researches from which the committee might prepare a statement on what research is needed, what research is now being carried on, what necessary research is not now being done, and on how such gaps might be filled. (Minute 21).
- 16. That the Commission consider the seven questions listed in the attached report of a special sub-committee which met at 9:30 a.m., July 7. As an indication of the lines along which the Commission's program of research might be developed. (Minute 23).
- 17. That the report of the Chairman of the Commission, which he expects to occupy about six printed pages, be included in the printed annual report of the Commission following the Executive Secretary's statement on the work of the Commission during the year. (Minute 22).

- 18. That the annual publication of a digest of statistics be considered essential, and that the Commission approve the Executive Secretary's proposal to include up to about twenty pages of such material in the forthcoming annual report, including a statement of total catches by species in each Sub-area. (Minute 22).
- 19. That the publication of summaries of research be deferred for the present year, but that member Governments be asked to submit, with the material presented to the next annual meeting of the Commission, summaries of research in form for publication, limited in length to one thousand words for the work of any Government in one Sub-area, and to a maximum of two thousand words from any one Government, it being understood that Iceland, not being represented on any Panel, be permitted to submit a research summary with a maximum length of one thousand words. (Minute 22).
- 20. That scientific material in support of important action by the Commission be included in its printed annual reports, and that in the forthcoming annual report there be included a statement on the basis for the recommended minimum mesh size for the haddock fishery in Sub-area 5 to be prepared by the United States. (Minute 22).
- 21. That two thousand copies of the annual report be printed, with reprints of special parts of the report at the discretion of the Executive Secretary. (Minute 22).
- 22. That the Commission adopt the common name "redfish" for <u>Sebastes marinus</u> (as recommended by Panel 5). (Minute 24).
- 23. That, in view of the Executive Secretary's possible need for editorial assistance, this subject be reviewed at the time of the next annual meeting of the Commission, and that in the meanwhile the Executive Secretary obtain such assistance as he needs through the Chairman and other members of the Committee on Research and Statistics. (Minute 25).
- 24. That the Commission authorize the Government of the United States to license not more than eight large trawlers at one time to fish for haddock in Sub-area 5 with a smaller mesh than that required by the minimum mesh regulation recommended by Panel 5 and adopted by the Commission. (Minute 26).
- 25. That the Commission note the difficulty of recruiting scientists to the field of fisheries research and the necessity of encouraging such recruitment, and note also the desirability of exchanging scientists between countries. (Minute 27).

B 3

The Committee deferred consideration of a program of redfish research (recommended by Panel 5) and of the research program for Sub-area 1 until the time of the next annual meeting of the Commission, when they can be considered in the light of the Commission's research program as a whole. The Committee accepted the report of its Sub-committee on hydrographic program and similarly deferred further action until the Committee considers the entire research program for the Convention area. (Minutes 18 and 19).

The Committee re-elected Dr. A. W. H. Needler (Canada) as its Chairman for the ensuing year. (Minute 28).

3





- 5 -

THE NORTHWEST ATLANTIC FISHERIES

COMMITTEE ON RESEARCH AND STATISTICS

1952

Minutes of Fifth Session, 2:30 p.m., July 5

18.

- <u>Program of Redfish Research</u> and <u>Research Program for Sub-area 1</u>

It was agreed that consideration of these two matters, arising from the reports of Panels 5 and 1 respectively, be deferred until the time of the next annual meeting of the Commission, when they could be considered in the light of an overall research program for the whole Convention area.

19. - Report of the Sub-committee on Hydrographic Program -

The report of the sub-committee appointed during the third session of the Committee to review the subject of hydrographic research in the Convention area is attached and includes a list of important hydrographic sections on which international co-operation might be of advantage, as well as a number of recommendations regarding hydrographic research program generally.

It was moved by Mr. Knollenberg, seconded by Mr. Rasmussen and agreed that the Committee accept the report of the sub-committee with thanks, and that it be examined at a later date when the Committee considers the entire research program for the Convention area.

20.

). - <u>Report of Sub-committee on Statistical Areas</u> -

A report of the special committee appointed during the first session of the Committee (Minute 4) to propose sub-divisions of the various Sub-areas for statistical purposes was presented by Mr. Wimpenny and is attached. There was some discussion of the desirability of adjusting certain of the statistical areas proposed in Sub-area 3 but it was agreed to defer consideration of such adjustments for the time being.

It was moved by Mr. Wimpenny, seconded by Mr. Espada and agreed that the Committee recommend to the Commission the adoption of the statistical areas defined in the report of the sub-committee as a tentative framework for the compilation of statistics, the suitability of the sub-divisions and progress in their use to be reviewed at the time of the next annual meeting of the Commission.

21. - Development of a Research Program by the Commission -

As instructed by the Commission, the Committee discussed at some length the constitution, time and place of meeting and

agenda for the special committee which is to consider the Commission's research program and report to the Committee on Research and Statistics immediately before the next annual, meeting of the Commission.

It was moved by Mr. Knollenberg, seconded by Dr. Lucas and agreed that a scientist representing each country be asked to meet with the Chairman of the Committee to draft a brief list of questions to be reported to the Commission to indicate the lines along which the development of a research program should be considered.

It was moved by Mr. Wimpenny, seconded by Mr. Knollenberg and agreed that a group of three, Dr. Taning, Dr. Walford and the Chairman, be asked to bring together as a basis for discussions by the special committee at its first meeting a listing of proposed researches. The special committee might use such a list as a basis for a statement on what research is needed by the Commission, what part of such needs are now being met, what necessary research is not now being done, and how such gaps might be filled, thus developing a research program for the Commission.

It was moved by Mr. Knollenberg, seconded by Dr. Lucas and agreed that the special committee on research program meet at Copenhagen next October, and consist of scientists only, one or two from each Government, the special committee to elect its own Chairman and obtain additional advice or assistance as required.

It was moved by Mr. Knollenberg, seconded by Dr. Taning and agreed that this special committee should meet at Copenhagen on the Friday and Saturday immediately preceding the ICES meeting.

It is, of course, understood that one or more additional meetings might be necessary, and it is expected that the special committee would meet immediately before the annual meeting of the Commission.

22.

6.

- Publications -

It was moved by Mr. Knollenberg, seconded by Dr. Taning and agreed to recommend that the report of the Chairman of the Commission, which he expects to occupy about six printed pages, be included in the printed annual report of the Commission following the Executive Secretary's statement on the work of the Commission during the year.

It was agreed to express to the Commission the Committee's opinion that it is essential to publish a digest of statistics, and its approval of the Executive Secretary's proposal that for the present year such material might run to twenty pages and will include total catches by species according to Sub-areas.

The publication of research summaries was discussed and it was considered that the inclusion of such summaries in the next printed annual report of the Commission might cause undesirable delay.

It was agreed to recommend to the Commission that member Governments be asked to submit, with the material presented to the next annual meeting of the Commission, summaries of research in form for publication, limited in length to one thousand words for the work of any Government in one Sub-area, and to a maximum of two thousand words from any one Government, it being understood that Iceland, not being represented on any Panel, be permitted to submit a research summary with a maximum length of one thousand words.

It was agreed to recommend that scientific material in support of important action by the Commission be included in the printed annual report of the Commission, and that in the forthcoming annual report there be included a statement to be prepared by United States on the basis for the recommended minimum mesh size for the haddock fishery in Sub-area 5.

It was agreed to recommend to the Commission that two thousand copies of the annual report be printed, with reprints of special parts of the report at the discretion of the Executive Secretary.

B 8

7

Hydrographic Sub-Committee

- 8 -

Minutes of First Session, 2:30 p.m., July 2nd, 1952. Algonquin Hotel, St. Andrews, New Brunswick.

Attendance:

Canada - Dr. W. Templeman, Dr. H. B. Hachey (Secretary), Dr. M. J. Dunbar. Denmark - Dr. A. V. Tåning. France - Mr. H. F. Barbier. Norway - Mr. O. Lund, Mr. B. Rasmussen. Portugal - Comm. T. de Almeida. Spain - Mr. C. Ojeda. United Kingdom - Dr. C. E. Lucas. United States - Dr. L. A. Walford, Dr. H. W. Graham. I.C.E.S. - Dr. A. V. Täning.

- 1. Upon being called to order by the Convener, Dr. Templeman, it was moved by Dr. Lucas, seconded by Dr. Walford and passed that Dr. Templeman be elected Chairman of the Sub-Committee.
- 2. The terms of reference were given consideration and it was concluded that the meeting was to deal with matters relating to fisheries hydrography, and this could best be accomplished by consideration of the subject under the following sub-divisions: (a) Basic hydrography of interest to fisheries, and (b) Hydrography in direct relation to fisheries studies.

Basic hydrography:

- 3. For Sub-Area 5, Dr. Walford gave a brief recapitulation of the hydrographic work carried out in the Georges Bank area, and indicated that it was considered that the basic hydrography of the area was fairly well known, and that there was no repetitive project in this area at the present time. Dr. Walford stressed the possible importance of meteorological studies for this area as of interest in determining movements of water masses on and off Georges Bank.
- 4. For Sub-Area 4, Dr. Hachey outlined the continuing programs on the Scotian Shelf and the Gulf of St. Lawrence, and gave as well a general outline of the activities furthered by the Canadian Joint Committee on Oceanography. In particular, it was indicated that a network of stations on the Scotian Shelf and the Gulf of St. Lawrence were occupied on a seasonal basis, and offshore work was extended at times to deal with problems of the Slope water and the Gulf Stream. Dr. Hachey also referred to the continuous recordings of surface water temperatures and salinities that have been made at selected stations over a period of thirty years.
- 5. For Sub-Areas 3 & 2, Dr. Templeman outlined the general coverage of the area of the Grand Banks and the Labrador Shelf by operations of the Fisheries Research Board vessel, the "Investigator II",

supplemented by the observations of the International Ice Patrol. Dr. Templeman, indicated that while at the present time a very thorough coverage of the Grand Banks is made in the early spring, it is hoped shortly to give attention to seasonal cruises of the area. He pointed out that at the present time the hydrographic work is planned chiefly to record the contributions of Labrador current to the area, and to obtain some indication of the transgression of warmer ocean waters over the Grand Banks. These features have been followed quite closely over a period of years.

Mr. Barbier outlined the cruise of the "President Tissier" in area 3 in 1951 but indicated that such cruises could not be undertaken regularly at the present time.

6. For Sub-Areas 1 & 2, Dr. Taning referred to the detailed report in the initial report of proceedings issued by ICNAF. He considered that the hydrographic sections in Sub-Area 2, as detailed in the above report, would be occupied periodically as they were of special interest to Danish investigations in the Greenland area.

Dr. Lucas referred to the future activities of British research ships in this area, and the possibility of periodic hydrographic, observations over a network of stations.

For information of the sub-committee, Dr. Dunbar outlined the types of investigations being prosecuted in such areas as Frobisher Bay, Ungava Bay and Hudson Bay and Strait.

7. Following a discussion of the present activities in basic hydrography of interest to the fisheries in Sub-Areas 1, 2, 3, 4 and 5, it was agreed to recommend to the Committee that:

> (a) whereas there were continuing programs on basic hydrography of interest to fisheries in the areas under consideration by ICNAF, and

(b) whereas research ships of various countries subscribing to ICNAF operate in these areas at times, and

(c) whereas the occupation of certain key hydrographic sections in these areas would materially assist this basic program,

(d) it be recommended to ICNAF that it is very desirable that when research ships of the subscribing countries are in areas 1, 2, 3, 4 & 5, they should, as opportunity permits, occupy the following hydrographic sections, observing, as a minimum, temperatures and salinities:

- <u>Area 1</u> (a) A section across Fylia Bank off Gothaab.
 - (b) A section off Cape Farewell to Hamilton Inlet.
 - (c) A section off Cape Farewell to Flemish Cap.
- <u>Area 2</u> A section off Hamilton Inlet to the deep water off the Shelf.
- <u>Area 3</u> A section off St. John's, Nfld., eastward across the Grand Bank and the Flemish Cap.
- Area 4 A section off Halifax, N.S., outwards over Emerald Bank to the Gulf Stream.
- Area 5 A section across Georges Bank.

Dr. Hachey agreed to produce maps covering the areas, and to indicate the location of sections now being occupied.

- 8. A discussion took place on hydrography in direct relation to fisheries studies. Dr. Walford introduced the subject of experimental laboratory studies. The sub-committee took the occasion to go on record as recognizing that experimental laboratory studies on North Atlantic fishes may lead to further understanding of the behaviour of fishes in relation to characteristics of the water. Such studies, it is felt, may serve to guide fishery hydrographers to improving their measures of hydrographic parameters.
- 9. A discussion of hydrography in relation to survival of the year-classes took place. Dr. Templeman discussed general conditions on the Grand Banks, while Dr. Walford brought out some important points relative to Georges Bank. It was agreed that the action of wind in removing water masses from the fishing areas, and the resultant removal of contained larvae might be an important phenomenon. It was agreed that further work on the survival of year-classes in relation to hydrography, to resume earlier work of Dr. Walford on Georges Bank, would be of considerable value. In particular, it was agreed that further work on Georges Bank on this problem of survival of year-classes, might be of considerable significance in relation to the experiment now proposed for the regulation of the fishery. It is therefore recommended to the Committee on Research and Statistics that:

The importance of studies on the survival of year-classes in relation to hydrography, should be drawn to the attention of contracting Governments.

10. 10. The meeting adjourned at 5:20 p.m.

Report to the Committee on Research and Statistics by the Sub-Committee

on Division of Commission Sub-Areas.

- 11 -

Meeting Time: 2:30 p.m., July 2, 1952.

Place: Lower Casino.

Present: Mr. R. S. Wimpenny (United Kingdom) Dr. P. Hansen (Denmark) Dr. H. W. Graham (United States) Mr. Birger Rasmussen (Norway) Mr. P. D. Espada (Spain) Comm. T. de Almeida (Portugal) Mr. A. M. Fleming (Canada) Mr. F. D. HcCracken (Canada) Mr. J. Côté (ICNAF) Absent: Captain L. J. Audigou (France) Mr. P. Eggerz (Iceland)

The following proposals for the consideration of the Committee on Research and Statistics were agreed to, although the observer for France and the Commissioner for Iceland were not present. Since the meeting the French observer has been consulted and his agreement obtained.

The sub-committee therefore suggests to the Committee on Research and Statistics that the following division of sub-areas 1, 2, 3, 4 and 5 be recommended to the Commission as a tentative proposal to be used for at least one year and reconsidered at the next annual meeting when changes in these sub-divisions may be dictated by practical experience of their use.

Proposed Division of Sub-areas.

<u>Sub-area 1</u> - proposed by Dr. Hansen and seconded by Comm. Almeida that sub-area 1 be divided along the parallels of latitude 58° 30' N, 50° 45' N, 62° 30' N, 64° 15' N, 66° 15' N and north of 68° 50' N.

These divisions have been indicated on a chart of subarea 1.

<u>Sub-area 2</u> - proposed by Dr. Graham and seconded by Capt. Espada that the division of sub-area 2 according to the chart proposed by Newfoundland in Document VIII (Chart 5) be accepted.

<u>Sub-area 3</u> - proposed by Mr. Rasmussen and seconded by Comm. Almeida that with the exception of the sub-divisions immediately adjacent to the Newfoundland coast as shown in chart 5 of Document VIII the whole of sub-area 3 be divided into rectangles of four degrees of longitude by two degrees of latitude as shown in the accompanying chart.

- Sub-area 4 proposed by Capt. Espada and seconded by Dr. Graham that the sub-divisions of sub-area 4 as shown in Document VIII, chart 4, and in chart 3 of Document VIII showing the statistical areas adopted in 1943 by the United States be accepted.
- <u>Sub-area 5</u> proposed by Mr. Rasmussen and seconded by Dr. Hansen that the sub-division of sub-area 5 as adopted by the United States in 1943 (Chart 3 in Document VIII) be accepted in so far as it applies to sub-area 5.

R. S. Wimpenny





14

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- 15 -

THE NORTHWEST ATLANTIC FISHERIES

COMMITTEE ON RESEARCH AND STATISTICS

1952

Minutes of Sixth Session, 2:00 p.m., July 7

23.

- Research Program for the Commission -

The Committee examined the attached report of its subcommittee which met at 9:30 a.m., July 7, to formulate the questions which must be answered by the Commission's research program.

It was moved by Dr. Walford, seconded by Dr. Lucas and agreed to accept the sub-committee's report and transmit to the Commission the seven questions it contains as an indication of the lines along which the Commission's program might be developed.

24. - Common name of <u>Sebastes</u> -

It was moved by Dr. Lucas, seconded by Dr. Taning and agreed that the Committee recommend to the Commission approval of Recommendation 1 in the report of Panel 5 of its meeting in February, 1952, that the common name "redfish" be adopted for <u>Sebastes marinus</u>.

25. - <u>Editorial Assistance</u> -

It was moved by Dr. Walford, seconded by Dr. Lucas and agreed that the Committee bring to the attention of the Commission the Executive Secretary's possible need for editorial assistance, and recommend that this subject be reviewed at the time of the next annual meeting of the Commission, and that in the meanwhile the Executive Secretary obtain such assistance as he needs through the Chairman and other members of the Committee.

26. - <u>Use of Small-Meshed Trawls in Sub-area 5</u> - <u>for Research Purposes</u>

Referring to the report of Panel 5 (Document IV) it was pointed out that in order to carry out the continued fishing (with the meshes now used) which is recommended in Item 4 of the research program, it is necessary that the United States Government be authorized to license trawlers under Item 5 of the recommended regulation.

It was moved by Mr. Trelles, seconded by Dr. Taning and agreed to recommend to the Commission that it authorize the Government of United States to license not more than eight

15

large trawlers at one time to fish for haddock in Sub-area 5 with a smaller mesh than that required by the minimum mesh regulation recommended by Panel 5 and adopted by the Commission.

27. - <u>Recruitment and Exchange of Scientists</u> -

It was moved by Dr. Walford, seconded by Dr. Rollefsen and agreed that the Committee call the attention of the Commission to the difficulty of recruiting scientists to the field of fisheries research, and to the necessity of encouraging such recruitment, and also to the desirability of exchanging scientists between countries.

28. - <u>Election of Chairman</u> -

On motion of Dr. Lucas, seconded by Dr. Taning. Dr. Needler was elected as Chairman of the Committee for the ensuing year. INTERNATIONAL COMMISSION FOR



- 17 -

THE NORTHWEST ATLANTIC FISHERIES

Committee on Research and Statistics. 9:30 a.m., July 7, 1952

The special sub-committee appointed by the Research and Statistics Committee met to formulate guiding aims on which the research policy of the Commission is based.

The sub-committee agreed, after considerable discussion, that the aim of the Commission being to obtain the maximum sustained yield, the following questions must be answered in order to achieve that aim:

- 1. What stocks are there, and to what extent do they intermingle?
- 2. What is the extent of exploitation on the different stocks?

3. How are these variables (i.e. stocks and fishing efforts) being changed (a) by man, (b) by nature?

4. What knowledge do we need to understand and, if possible, control such changes?

5. What quantity and quality of the various stocks of fishes can be expected at any given intensity of fishing?

6. What stocks are not being used fully?

7. How can fuller use of stocks be brought about, as, for example, by prediction of movements or availability?

The sub-committee wishes to point out that the above questions imply many others. These can be elaborated at the special meeting of scientists to be held at Copenhagen in September, as a basis for planning the overall research program of the Convention Area.