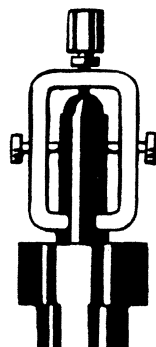


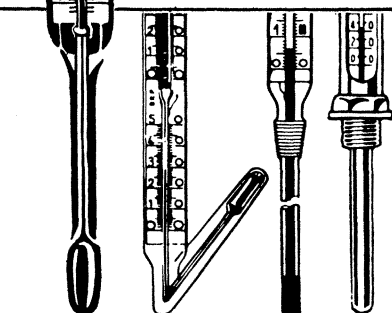
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Meetings

Migration of Marine Organisms

A Latin-American symposium on migration of marine organisms was held in Guayaquil, Ecuador, from 27 June to 1 July. It was organized jointly by the UNESCO Science Cooperation Office for Latin America and the University of Guayaquil.

It was the fifth of the series of meetings on marine sciences which the office has held since its foundation in 1949. The previous meetings, like the Guayaquil meeting, had the double character of symposium and working-party session. They were held at Concepción, Chile, in 1954; São Paulo, Brazil, in 1955; Montemar, Chile, in 1956; and Montevideo, Uruguay, in 1957.

Enrique Rioja (Mexico) was elected chairman of the Guayaquil symposium, and Hugo Ferrando (Uruguay) acted as secretary. Thirteen marine scientists, from the following countries, participated: Argentina, Brazil, Chile, Cuba, Ecuador, Mexico, Peru, and Uruguay. The UNESCO Science Cooperation Office for Latin America was represented by Angel Establier.

The program of the meeting included sessions on the following subjects: (i) migration of marine organisms (fish; invertebrates; cephalopods; birds; other vertebrates); (ii) environmental factors (oceanographic and biological) that cause migration; (iii) standardization of methods for studying migratory phenomena, with a view to comparing results; (iv) establishment of regional programs for work on migration of aquatic populations; and (v) other problems related to migration of marine organisms.

At the conclusion of the symposium, the following recommendations were unanimously approved by the participants.

1) The symposium, considering that the study of the migration of marine organisms by its very nature requires a joint effort on the part of the countries concerned, recommends regional action. The following delimitation of problems common to a number of countries is made with a view to their being undertaken regionally. Argentina, Brazil, and Uruguay: Thunnidae, Scombridae, Clupeidae (*Sardinella* sp.), Galeorhinidae (*Galeorhinus vitaminicus*), and Mugilidae (*Mugil* sp.). Chile and Argentina: Merlucciidae (*Merluccius* sp.), Decapoda (Macrura: "langostinos" shrimps, and "langosta" de Juan Fernández). Peru and Chile: Thunnidae (*Neothunnus macropterus*), Engraulidae (*Engraulis* sp.), Scombroidae (*Sarda* sp.), and Decapoda (*Munida* sp.). Peru, Ecuador, and Colombia: Thunnidae (*Katsuwonus* sp.; *Neothun-*

nus macropterus), Decapoda (Macrura: "langostinos"). Mexico, Caribbean, and coast of Venezuela: Thunnidae (*Katsuwonus* sp.; *Thunnus* sp.), Centropomidae (*Centropomus* sp.), Decapoda (Macrura: *Panulirus* sp.; Penaeidae: *Penaeus* sp.).

2) It is recommended that information be exchanged between Argentina and Chile covering research results and methods used in work on the principal species of *Merluccius*.

3) Marking trials should be held in conjunction with studies on the biological cycle of the species (growth, reproduction, alimentation, and so on), with a view to relating migration and the different phases of life of individuals. Similarly, the importance of the study of environmental conditions emphasized at the meeting of the UNESCO Marine Sciences Working Party, held at Montevideo 22 to 24 May 1957, is underlined.

4) In view of the importance of movement and mixture of different bodies of water, it is expressly recommended that Argentina, Brazil, and Uruguay should study the northern and southern limits and fluctuations, respectively, of subantarctic and subtropical waters and also the origin of the water of the coastal region. It is hoped that similar work may be undertaken for the southeast Pacific area in the fairly near future.

5) UNESCO is asked to interest the governments of Latin America in supporting this type of scientific work, which is an indispensable basis for a proper knowledge of the renewable resources of the sea.

6) It is recommended that the next marine sciences meeting to be organized by the UNESCO Science Cooperation Office for Latin America should be divided into two sections: "Abiotic oceanography" and "Marine biology."

J. SWARBRICK

Centro de Cooperación Científica Para América Latina, Montevideo, Uruguay

Forthcoming Events

December

26-31. American Assoc. for the Advancement of Science, annual, New York, N.Y. (R. L. Taylor, AAAS, 1515 Massachusetts Ave., NW, Washington 5)

The following 52 meetings are being held in conjunction with the AAAS annual meeting.

AAAS Committee on Science and the Promotion of Human Welfare (B. Commoner, Shaw School of Botany, Washington Univ., St. Louis 5, Mo.). 26, 28, 29 Dec.

AAAS Cooperative Committee on the Teaching of Science and Mathematics (J. R. Mayor, Director of Education, AAAS, Washington, D.C.). 28, 29 Dec.