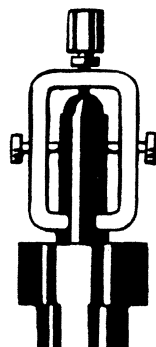


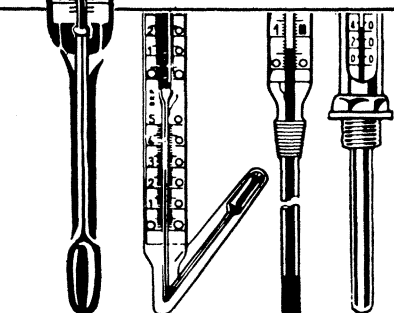
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Meetings

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.), Scombroidea (*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.

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Academy Conference (J. G. Arnold, Jr., Loyola Univ., New Orleans, La.). 26–27 Dec.

Alpha Epsilon Delta (M. L. Moore, 7 Brookside Circle, Bronxville, N.Y.). 29 Dec.

American Assoc. of Clinical Chemists (H. Goldenberg, Dept. of Biochemistry, Hillside Hospital, P.O. Box 38, Glen Oaks, N.Y.). 26–27 Dec.

American Assoc. of Scientific Workers (Miss M. Yevick, 214 Western Way, Princeton, N.J.). 27 Dec.

American Astronautical Soc. (R. Fleisig, 58 Kilburn Rd., Garden City, N.Y.). 27 Dec.

American Astronomical Soc. (J. A. Hynek, Dearborn Observatory, Northwestern Univ., Evanston, Ill.). 28–31 Dec.

American Council on Women in Science (Miss E. B. Thurmann, Div. of Research Grants, National Insts. of Health, Bethesda 14, Md.). 27 Dec.

American Economic Assoc. (K. E. Boulding, Dept. of Economics, Univ. of Michigan, Ann Arbor). 26 Dec.

American Geophysical Union (R. Jastrow, NASA Theoretical Div., 8719 Colesville Rd., Silver Spring, Md.). 26 Dec.

American Nature Study Soc. (R. E. Hopson, 4138 S.W. Fourth Ave., Portland 1, Ore.). 27–30 Dec.

American Psychiatric Assoc. (P. H. Knapp, Boston Univ. School of Medicine, Boston, Mass.). 29, 30 Dec.

American Soc. of Criminology (D. E. J. MacNamara, New York Inst. of Criminology, 115–117 W. 42 St., New York 36). 26, 27 Dec.

American Soc. of Naturalists (R. C. Rollins, Gray Herbarium, Harvard Univ., 22 Divinity Ave., Cambridge 38, Mass.). 27 Dec.

American Soc. of Zoologists (R. L. Waterson, Dept. of Zoology, Northwestern Univ., Evanston, Ill.). 28–30 Dec.

American Sociological Assoc. (V. H. Whitney, Dept. of Sociology, Wharton School of Finance, Univ. of Pennsylvania, Philadelphia, Pa.). 28, 29 Dec.

American Statistical Assoc. (R. E. Lewis, New York Area Chapter, 55 Wall St., New York 15). 29 Dec.

Association of American Geographers (C. Morrison, Jr., American Geographical Soc., Broadway at 156 St., New York 32). 27–30 Dec.

Association for Computing Machinery (W. F. Cahill, NASA, 8719 Colesville Rd., Silver Spring, Md.). 29 Dec.

Astronomical League (Miss A. A. Pindar, Amateur Astronomers Assoc., Inc., 223 W. 79 St., New York 24). 28 Dec.

Beta Beta Beta Biological Soc. (Mrs. F. G. Brooks, P.O. Box 515, Ansonia Station, New York 23). 27 Dec.

Biomedical Information Processing Organization (R. S. Ledley, Natl. Biomedical Research Foundation, Silver Spring, Md.). 30 Dec.

Committee on Cosmetics, American Medical Assoc. (J. B. Jerome, 535 N. Dearborn St., Chicago 10, Ill.). 29 Dec.

Conference on Scientific Communication Problems (G. L. Seielstad, Technical Reports Group, Applied Physics Laboratory, Johns Hopkins Univ., Silver Spring, Md.). 26, 27 Dec.

Conference on Scientific Manpower (T. J. Mills, Natl. Science Foundation, 1951

Constitution Ave., NW, Washington 25).
27 Dec.

Conference on Scientific Manuscripts
(N. Reingold, Dept. of History of Science
and Medicine, Yale Univ., New Haven,
Conn.). 29 Dec.

Ecological Soc. of America (R. S. Miller,
Dept. of Biology, Univ. of Saskatchewan,
Saskatoon, Saskatchewan, Canada). 26-31
Dec.

History of Science Soc. (D. J. de Solla
Price, Dept. of History of Science and
Medicine, Yale Univ., New Haven, Conn.).
27-29 Dec.

Institute of Management Sciences (M.
M. Flood, Mental Health Research Inst.,
205 N. Forest Ave., Ann Arbor, Mich.).
30 Dec.

Metric Assoc. (J. T. Johnson, 694 W. 11
St., Claremont, Calif.). 27 Dec.

Mountain Lake Biological Station (H.
H. Hobbs, Jr., Univ. of Virginia, Char-
lottesville, Va.). 29 Dec.

National Acad. of Economics and Political
Science (A. E. Taylor, Parkton, Md.).
27 Dec.

National Assoc. of Biology Teachers (P.
Webster, Bryan City Schools, Bryan, Ohio).
27-30 Dec.

National Assoc. for Research in Science
Teaching (G. Mallinson, School of Gradu-
ate Studies, Western Michigan Univ.,
Kalamazoo). 27 Dec.

National Assoc. of Science Writers (E.
Ubell, Herald Tribune, New York, N.Y.).
27 Dec.

National Geographic Soc. (W. R. Gray,
NGS, 16th and M Sts., NW, Washington
6). 30 Dec.

National Speleological Soc. (Brother
Nicholas, FSC, Dept. of Biology, Univ.
of Notre Dame, Notre Dame, Ind.). 27
Dec.

Nature Conservancy (J. W. Brainerd,
Springfield College, Springfield, Mass.).
27 Dec.

New York Acad. of Sciences (D. Pur-
pura, College of Physicians and Surgeons,
Columbia Univ., New York, N.Y.). 30
Dec.

Science Clubs of America (Miss L. V.
Watkins, Science Service, 1719 N Street,
NW, Washington 6). 30 Dec.

Scientific Research Soc. of America (D.
B. Prentice, 56 Hillhouse Ave., New Haven
11, Conn.). 29 Dec.

Sigma Delta Epsilon (Mrs. E. Cortelyou,
Aeroprojects Inc., W. Chester, Pa.). 27-29
Dec.

Society for General Systems Research
(C. A. McClelland, Dept. of History, San
Francisco State College, 1600 Holloway
Ave., San Francisco, Calif.). 29 Dec.

Society for the History of Technology
(C. W. Condit, Department of English,
Northwestern Univ., Evanston, Ill.). 27-29
Dec.

Society for Industrial and Applied
Mathematics (J. Griesmer, IBM Research
Center, Box 218, Yorktown Heights, N.Y.).
28 Dec.

Society for Industrial Microbiology (J.
A. Ramp, 11 Van Dyke Rd., Waldwick,
N.J.).

Society of the Sigma Xi (T. T. Holme,
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29 Dec.

Society for the Study of Evolution (H.
H. Ross, State Natural History Survey,
Urbana, Ill.). 27-29 Dec.

Society of Systematic Zoology (C. F.
Lytle, Dept. of Zoology, Tulane Univ.,
New Orleans 18, La.). 27-29 Dec.

Tau Beta Pi Assoc. (R. H. Nagel, Tau
Beta Pi Assoc., Univ. of Tennessee,
Knoxville). 29 Dec.

Torrey Botanical Club (Miss A. Hervey,
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56, N.Y.). 27 Dec.

27-28. Council for the Improvement of
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cology and Role Growth Theory of Com-
munication and Learning, New York, N.Y.
(R. L. Switzen, 840 Grand Concourse,
New York 51.)

27-29. Conference on Strong Interac-
tions, Berkeley, Calif. (A. C. Helmholtz,
Dept. of Physics, Univ. of California,
Berkeley.)

27-29. Northwest Scientific Assoc. and
Idaho Acad. of Science, joint meeting,
Moscow. (E. J. Larrison, Dept. of Biologi-
cal Sciences, Univ. of Idaho, Moscow.)

27-14. Bahamas Surgical Conf., Nassau.
(B. L. Frank, P.O. Box 4037, Fort Lauder-
dale, Fla.)

28. Association for Education in Inter-
national Business, St. Louis, Mo. (J. N.
Behrman, Univ. of Delaware, Newark,
Delaware)

28-30. American Economic Assoc., St.
Louis, Mo. (J. W. Bell, Northwestern
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