

## SCIENTIFIC EVENTS

### THE COMMONWEALTH SOLAR OBSERVATORY, CANBERRA<sup>1</sup>

THE first report of the present director of the Mt. Stromlo Observatory refers to the period May, 1939–April, 1940, though it also sketches the history of the observatory since its establishment in 1910, and gives a brief account of the main observational programs carried out since the first director's appointment in 1924. The observations of solar radiation begun in 1926 have been completed, and a discussion of the results is promised. One of the most interesting conclusions is that the correlation between total solar radiation and duration of bright sunshine is so close as to be useful for derivation of the first quantity, the direct observation of which is difficult, from the second, which is a standard meteorological datum. Spectrohelioscopic and visual observations of the sun have been directed respectively to the detection and mapping of bright solar eruptions, several spectrograms of which have been obtained during 1939. As compared with flash spectra, these show a puzzling enhancement of low-excitation Fe I and Fe II lines.

A new program of stellar observations is planned for the Reynolds 30-inch reflector which has been converted from Newtonian to Cassegrain form for the purpose. A single-prism spectrograph for spectroscopic parallaxes and a photo-electric photometer have been made for use at the Cassegrain focus. The work on cosmic radiation and atmospheric physics with which the name of the observatory is especially associated has been carried on with a few modifications, chief among which are the discontinuance of the observations of atmospheric electricity and night-sky luminosity, and an extension of the work on cosmic rays and the ozone content of the atmosphere. With the establishment five miles away of an official Commonwealth meteorological station, many of the routine meteorological observations have been discontinued, though measurements having a direct bearing on other observatory programs are still being carried out. An impressive list of papers published during the year shows that the establishment is more than maintaining its high standing amongst southern hemisphere observatories.

### THE PACIFIC EXPEDITION OF THE AMERICAN MUSEUM OF NATURAL HISTORY

ACCORDING to a preliminary report on the program of the American Museum-Pacific Expedition which is now conducting field research along the Pacific coasts of Colombia and Ecuador, received by the American Museum of Natural History from Dr. Robert Cushman Murphy, curator of oceanic birds, the winter

<sup>1</sup> *Nature*.

range, hitherto unknown, of several species of sea-birds has been established.

Dr. Murphy is leader of the expedition that has been in the northern Pacific aboard the diesel schooner *Askoy* since February, studying the relationship between the ocean waters adjacent to this part of South America and the life of the sea and the shore.

This area of the South American coast is one of the least known in the whole world as it is far from the regular trade routes and seldom visited by ships. It has been found that this region has a totally different current and temperature system from that of any other part of the Pacific Ocean adjoining South America and its life is correspondingly distinct. The field studies include basic oceanographic investigations, quantitative measurements of the microscopic life in the sea and study of the birds, fish and other animal life that depend upon this particular oceanic pasture for their existence.

The personnel, in addition to Dr. and Mrs. Murphy, includes Dr. John C. Armstrong of the department of living invertebrates, and Mr. José G. Correia, field assistant. Dr. Armstrong is making extensive oceanographic studies and Mr. Correia is collecting sea birds. To further the survey, extremely valuable scientific equipment was lent by the Hydrographic Office of the Navy Department, the U. S. Coast and Geodetic Survey and the Woods Hole Oceanographic Institution. These instruments include deep sea thermometers, recorders for counting minute sea-life and other recorders to test the salinity of the ocean water.

In addition to the oceanic work, the party hopes to explore most of the numerous bays and estuaries of the coast and also to make two land journeys to the crest of the Baudo-Mountain range, which is not connected with the Andean range, and from which the museum has, as yet, no birds or other animal collections.

### THE ZOOLOGICAL EXPEDITION TO THE GALAPAGOS ISLANDS OF THE FIELD MUSEUM

DR. CLIFFORD GREGG, director of the Field Museum, Chicago, and Edward H. Bean, director of the Brookfield Zoological Garden, announce that the zoological expedition to the Galapagos Islands, sponsored and led by Leon Mandel, of Chicago, and conducted on board a yacht chartered by him, is on its way home with important collections for both institutions.

Approximately 2,000 specimens of fishes, birds and reptiles have been collected for the museum, as well as two live albatrosses, three frigate birds, eleven penguins, three land tortoises, a giant Barrington iguana,

five ground finches, a booby (bird) and a tinamou for the zoo.

In addition to fifteen islands of the Galapagos group, the expedition visited fishing grounds on the north Peruvian coast, and in the Cocos Islands near Panama. The collections for the museum include about 1,500 fishes representing some 200 different species. Included are specimens for the preparation of a habitat group of fishes to be shown in an undersea setting. There are also two sailfish less than five inches long, believed to be among the smallest specimens of this species ever taken (the mature sailfish caught by sportsmen are eight feet long, or more, and weigh upwards of 150 pounds). A twelve-foot manta (giant species of devil-fish), a 340-pound striped marlin and some fingerling dolphins are included in the fish collections. The manta, harpooned, was landed only after a long fight.

The bird collection numbers about 425 specimens, collected on different islands. Those from Galapagos are of special interest and importance, according to Karl P. Schmidt, chief curator of zoology, because the observed differences in the birds from island to island in the Galapagos group were the thing that caught Darwin's attention on his visit to these islands a hundred years ago, and formed the basis of his reasoning which led to the theory of evolution. Field Museum hopes to use the birds collected by the Mandel expedition in the preparation of an exhibit illustrating evolution.

Mr. Mandel is accompanied by Mrs. Mandel and a museum party including Dr. Wilfred H. Osgood, curator emeritus of the department of zoology; Rudyerd Boulton, curator of birds; Loren P. Woods, assistant curator of fishes; Staff Taxidermist Leon L. Walters; Melvin A. Traylor, Jr., volunteer worker in the division of birds, and Peter Lambert, of Zion, Illinois, an experienced amateur diver.

#### APPOINTMENTS, PROMOTIONS AND RETIREMENTS AT THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

DR. SVERRE PETTERSEN has been appointed head of the department of meteorology at the Massachusetts Institute of Technology for the next academic year. Dr. Pettersen, who was for seven years in charge of the Weather Forecasting Institute in Bergen, Norway, and who since 1939 has been acting head of the long-established course in meteorology, which now becomes a separate department, will succeed Professor Carl-G. A. Rossby, who has been on an extended leave of absence as assistant chief of the United States Weather Bureau in charge of research. Professor Rossby will resign to join the faculty of the University of Chicago.

Faculty promotions to the rank of professor include Hoyt C. Hottel, Dr. Thomas K. Sherwood and Dr.

Harold C. Weber, all of the department of chemical engineering; Dr. Ernest H. Huntress, of the department of chemistry, and Dr. Julius A. Stratton, of the department of physics.

Members of the faculty advanced to the rank of associate professor are Dr. Samuel C. Collins, Dr. Arthur R. Davis, Dr. Gerhard Dietrichson, Dr. Robert C. Hockett, Dr. Nicholas A. Milas and Charles M. Wareham, all of the department of chemistry; and Dr. Robert S. Harris and Dr. Marshall W. Jennison, of the department of biology and public health.

Promoted to the rank of assistant professor are Joseph A. Bergantz, department of chemical engineering; Dr. Alfred H. Clifford, department of mathematics; Lyman M. Dawes, Dr. Arthur E. Fitzgerald and James E. Mulligan, department of electrical engineering; Albert G. Dietz, department of building engineering and construction; John A. Hrones, department of mechanical engineering; Walter McKay, department of aeronautical engineering; Dr. Charles A. Myers, department of economics and social science; Herman J. Shea and Charles H. Norris, department of civil engineering; Walter F. Urbach, department of English and history, and James M. Austin, department of meteorology.

Appointments to the grade of instructor include Walter K. Bodger, Louis F. Coffin, Jr., Kenneth R. Fox, Frank J. Mehringer, all of the department of mechanical engineering; Robert Plunkett, of the department of electrical engineering, and Miss Margaret Whitcomb, of the department of meteorology.

Two new members of the faculty of the department of biology and public health, both of whom will be active in the program in biological engineering, are Dr. Richard Scott Bear, assistant professor in the department of chemistry at Iowa State College, and Dr. David Floyd Waugh, of the department of zoology of Washington University, St. Louis.

Lieutenant-Commander George C. Manning, who served as an associate professor in the department of naval architecture and marine engineering in 1938 and 1939, will return in the autumn as an associate professor.

Eight members of the staff will retire this year, including Charles E. Fuller, who joined the staff of the department of mechanical engineering in 1892; Professor George Owen, of Newton, internationally known yacht designer who came to the faculty of the department of naval architecture and marine engineering in 1915; Professor Arthur A. Blanchard, a member of the staff of the department of chemistry since 1899; Professor Ralph R. Lawrence, of the department of electrical engineering, who was appointed to the staff in 1896; Professor Joseph C. Riley, who has been on the staff of the department of mechanical engineering since 1898, and Professor Edward E. Bugbee, who ex-