

complete a picture of the whole process as possible. The objective chosen to give coherence to the observations was the simplest one that came to mind: to concentrate all the observations on the central stream of the Trade Wind which climbs up the mountain-side and passes through the saddle; to measure the properties of the air as it crosses the coast and again as it debouches through the saddle, and to see whether the depletion of its water vapour and sea-salt content could be related to the amount of rain which fell on the slopes, and to the salinity of the rain. The Trade Wind inversion provided a convenient and easily recognized upper boundary to the mass of air involved in the experiment.

This 'budget' operation, as it was called, required the co-operation of many people. On one day, the mass of air chosen for investigation was that which crossed the coast between 1 p.m. and 3 p.m. It was estimated that it would take two hours to reach the saddle, so that it would be passing out of the experimental area between 3 p.m. and 5 p.m. Between 1 and 3 p.m., two light aircraft patrolled offshore, and observations were taken of the sea-salt spectrum, the temperature and humidity of the air, and the water content of clouds, up to the base of the inversion. During the same period, pilot balloons were run at stations along the coast in order to determine the boundaries of the stream which converged into the saddle. At 1 p.m. observers set off on two parallel roads towards the saddle, emptying and rinsing out the hundred rain gauges which had been set out at intervals of a mile apart. They aimed at reaching the saddle at 3 p.m.; at that time other observers followed up along the same roads, measuring the rain which had fallen in the two-hour period and taking samples for salinity determinations; they aimed at arriving at the saddle area at about 5 p.m. At 2.30 p.m. the Dakota aircraft took off, climbed over the sea, taking soundings of temperature and humidity, and then went inland above the orographic cloud to the saddle. Here there was usually a clear space, and a sounding was made as low down as possible, usually to within 500 ft. of the ground, measuring temperature, humidity and sea-salt content. The Dakota continued observations until 5 p.m., alternately sounding in the saddle area and making runs down the mountain-side to Hilo in the orographic cloud, at fixed ground clearances, usually 1,000 and 2,000 ft. On these runs the liquid water content and droplet spectra of the orographic cloud were observed. During the period 1 p.m.-5 p.m., the spectrum of the raindrops was observed at two levels on the slope, and electric charges on cloud droplets at one level. A 10-cm. and a 3-cm. radar observed the motion of showers; cameras on the upper slope of Mauna Loa recorded the motion of the cloud tops, and anemometers at the coast, on the slope, and in the saddle measured the run of the wind.

Despite an unusually fine stretch of weather during November, a great deal of information was gathered. Several months will be needed to reduce all these observations to tabular form for publication later this year.

The burden of the many detailed arrangements for so large a group of people inevitably fell on the Honolulu group who acted as hosts; without their efficient organization of accommodation, transport and the like, much less would have been achieved. Excellent co-operation was given, too, by the aeronautical and defence authorities at Hilo Airport, and by the people of Hilo.

OBITUARIES

Mr. J. F. Didusch

JAMES FRANCIS DIDUSCH, internationally known as a medical and embryological illustrator, died on March 16 in Baltimore, where he was born on June 17, 1890. His grandfather was an artist-lithographer in Munich, Germany, and his father a sculptor and wood-carver in Baltimore. James Didusch studied both mechanical drawing and the fine arts at the Maryland Institute of Art and Design, and medical illustration with the late Max Broedel at the Johns Hopkins Medical School. In 1913 he joined the newly formed Department of Embryology of the Carnegie Institution of Washington, and worked in its Baltimore laboratory during his entire professional career with only one brief interruption.

Didusch illustrated the researches of the distinguished embryologists, F. P. Mall and George L. Streeter, and their colleagues with a remarkable combination of accuracy and beauty. He would never draw anything which he could not see clearly and comprehend. Thus he acquired a sound knowledge of human development, and himself became a contributor to the precision and clarity of work published from the Department and sometimes an anonymous colleague in the research. Although from time to time he also illustrated clinical books and articles, his real life-work is in the successive volumes of the Carnegie Contributions to Embryology. Among hundreds of drawings, it is difficult to choose those which best illustrate his beautiful style. Notable among his early work are the plates for L. H. Weed's monograph on the cerebro-spinal spaces (vol. 5) and for Florence Sabin's article on the primitive blood vessels (Vol. 6). Later on he drew a series of pictures of important human embryos which have become classics of embryological art and are widely copied in the text-books, the finest of all perhaps being the lateral view of a 10-somite embryo, Carnegie 5078, in Volume 20 of the Contributions. A special talent for clear and simple diagrammatic representation without losing the similitude of animal tissues is shown by a page of diagrams illustrating the placentation of the rhesus monkey, Vol. 27, p. 9. Even in the last volume published in his lifetime (Vol. 35) the drawings for L. J. Wells's monograph on the diaphragm, made when his health was already failing, show his characteristically firm touch in line drawing and his refined half-tone style. Didusch carried his zeal for perfection all the way to the press-room, where he often supervised the inking of the rollers or helped mix the colours so that the drawings would be properly printed.

Mr. Didusch was a man of very sociable disposition. Loving good music, good food and a good story, he endeared himself to all his fellow workers, who will remember him as a generous friend as well as a stimulating collaborator and one of the greatest scientific illustrators of his time.

GEORGE W. CORNER

Mr. W. R. Sherrin

WILLIAM ROBERT SHERRIN was born at Twickenham on May 20, 1871, and died at South Norwood, London, on March 22 after a long failing in health. He was a son of John Sherrin, R.I., from whom he inherited a skill of hand, brush and pencil. As a boy he was sickly, and an outdoor life was prescribed:

partly for this reason his education was neglected, though, for a time, he attended Taplow Grammar School. When he was eight years old his family moved to Ramsgate, and he soon began to wander about the Isle of Thanet and became an avid collector of natural history specimens. Later, he opened a taxidermist's shop at Ramsgate. His ability at mounting and at dissection led to his appointment in 1895 as an articulator in the Zoological Department of the British Museum (Natural History). His health by then had so improved that for many years he cycled to and from Southend-on-Sea, where he had gone to live; until recently he rose at 4 or 5 a.m. and worked at whatever extra task he had on hand. He was employed in the Zoological Department of the Museum until 1928, his manipulative excellence being signalled by the naming after him of a rat from Sind and a bat from New Guinea.

In 1919 Sherrin was appointed curator and secretary of the South London Botanical Institute. This Institute at South Norwood, with a large and valuable herbarium and library, was founded by A. O. Hume in 1911, "to promote, encourage, and facilitate amongst the residents of South London, the study of the science of Botany". To some this appointment was surprising; but Sherrin was a well-known amateur botanist with a special interest in grasses, sedges and, more particularly, mosses. He

was attracted to mosses because they were so often used as packing for zoological specimens: the frequency of *Sphagnum* may have led to his study of this difficult genus, on which he published "An Illustrated Handbook of the British Sphagna" in 1927.

No longer able to put in full time at the British Museum, he worked from 8 a.m. to 12 noon. In 1928, at his request, he was transferred to the Department of Botany to take charge of the moss collection after A. Gepp's retirement. He continued there until 1947, and on leaving the Museum was awarded a Civil List pension.

Sherrin was highly successful at South London, applying himself with energy and devotion to running the Institute. He was a born teacher—though not a good lecturer—and had an inspiring and helpful influence on young and old seeking a knowledge of plants, as several who became eminent botanists have testified. The field excursions which he regularly conducted were of great value not only to adult members of the Institute but also to university students and others who found stimulus and satisfaction in his knowledgeable enthusiasm.

He was elected an associate of the Linnean Society of London in 1919, and recently a life-member of the Zoological Society. He served as president of the British Bryological Society during 1947–48.

J. RAMSBOTTOM

NEWS and VIEWS

Sir German Sims Woodhead, K.B.E. (1855–1921)

GERMAN SIMS WOODHEAD, who was born one hundred years ago on April 29, 1855, came of old Yorkshire Quaker stock, and was educated at Huddersfield College and then at the University of Edinburgh, where he graduated in medicine in 1878, taking his M.D. three years later. After postgraduate studies in London, Berlin and Vienna he became demonstrator of pathology at Edinburgh under W. S. Greenfield and superintendent of the research laboratories of the Royal College of Physicians of Edinburgh. In 1890 he was appointed director of the Conjoint Board's laboratories in London. In the *Lancet* laboratory Sims Woodhead investigated incandescent gas lighting, the flashpoint of lamp oils, and the standardization of disinfectants. In the early days of diphtheria antitoxin he placed its manufacture in Great Britain on a sound basis. As assistant commissioner of the Royal Commission on Tuberculosis, he became a recognized authority on that disease, and with P. C. Varrier-Jones he founded the Papworth Colony near Cambridge in 1918. In 1899 he succeeded A. A. Kanthack as professor of pathology in the University of Cambridge, where he played a leading part in the planning of new laboratories. His best-known books are "Practical Pathology" (1883), for many years the standard text-book for students, and "Pathological Mycology" (1885) with A. W. Hare. Sims Woodhead founded the *Journal of Pathology and Bacteriology*, of which he was the sole editor until 1906, when he continued as editor-in-chief until 1920. For his work on chlorination of water for the supply of troops and for other war services he was created K.B.E. in 1919. He was president of the Royal Microscopical Society and of the Pathological and Bacteriological Laboratory Assistants' Association, which he was instrumental in organizing. A militant teetotaler, a genial companion and a delight-

ful host, Sims Woodhead died on December 29, 1921, after a long period of failing health.

Honorary Fellowships of the Imperial College of Science and Technology, London

THE following have been elected to honorary fellowships of the Imperial College of Science and Technology, London: Dr. Eric Ashby, president and vice-chancellor of The Queen's University, Belfast; Mr. L. C. Hill, technical adviser to the board of the Rio Tinto Company; Sir George Nelson, chairman and managing director of the English Electric Co., Ltd.; Prof. J. A. S. Ritson, emeritus professor of mining in the Imperial College; Sir George Thomson, master of Corpus Christi College, Cambridge, and emeritus professor of physics in the Imperial College.

Pastoral Research at Armidale, New South Wales

A SMALL research committee is being established by the Commonwealth Scientific and Industrial Research Organization, Australia, and by the University of New England, so that pastoral research by the staff at the Armidale Regional Pastoral Laboratory of the C.S.I.R.O. and by the University's newly established Faculty of Rural Science will be closely linked and that the resources of both can be related and used to best advantage. For the time being, the committee will comprise the following: Prof. G. L. McClymont, recently appointed to the chair of rural science at the University of New England, who will act as chairman and University representative; Mr. R. Roe, the senior officer at Armidale of the Division of Plant Industry, C.S.I.R.O., who will be deputy chairman and representative of the Division of Plant Industry; Dr. A. T. Dick, of the Division of Animal Health and Production, Parkville, who has been appointed because of his outstanding knowledge and experience