OBITUARY

UPENDRA KUMAR DAS

DR. DAS, research associate in charge of the biochemical laboratory at the Experiment Station of the Hawaiian Sugar Planters' Association, was instantly killed by an explosion of apparatus in his laboratory on October 22, 1937. His passing away, just as he was equipped for still finer research, has deprived us of a thorough scientist who was motivated by, and never lost sight of, the practical viewpoint.

Born in India on July 23, 1902, he received his early education at Tagore's School. Coming to Honolulu in 1924, he enrolled at the University of Hawaii. Majoring in sugar technology, he completed the work for his bachelor's degree in three years and in June, 1927, was graduated with honors. While attending the university as an undergraduate, his earlier acquired analytical point of view, coupled with his optimism, his happy nature and his personal kindness, won the respect of his classroom associates, and on the athletic field, his skill was recognized when his team-mates elected him captain of the university soccer team. After his graduation, although then employed, he found time to secure additional experience in the laboratory of biological chemistry at the University of Hawaii and in 1930 was awarded his master's degree. Securing a leave of absence from his work in 1934, he spent a year in residence at the University of Minnesota and realized one of his earlier ambitions when he received his doctor's degree in 1935. While at Minnesota, he was elected to Sigma Xi.

The life of young Dr. Das was intimately connected with the Experiment Station of the Hawaiian Sugar Planters' Association. While still a student at the university, he became associated with the station as a part-time student assistant. Upon graduation, in 1927, he was appointed an assistant agriculturist. Thus, he had ample opportunity to get first-hand contact with field problems and learned to know the sugar-cane plant as it grew in the field under many and varied conditions. This experience contributed very largely to all his work thereafter and gained for him the respectful attention of the practical field men in whose problems he became interested.

His contributions to sugar-cane agriculture were substantial and conspicuous. His discovery and perfection of the method of preserving cut cane stalks with their tassels has been largely responsible for the success of the present-day crossing technique which is used in Hawaii. This work was done while he was still a student assistant. His visit to India and return therefrom in 1930 with seeds resulting from numerous crosses of the hardy Indian canes, which he made in cooperation with the well-known Indian cane breeder, T. S. Venkatraman, added fine breeding material to the canes already in Hawaii. He devoted a number of years to weather studies and laid the foundation for a simple measurement of the effective temperature and added much to our understanding of temperature-yield relationships. During these early years, he never lost sight of the importance of cane quality and his next notable contributions dealt with cane juice quality. Thus, the results of his studies on the nature and progress of sugar storage in the cane plant were increasingly valuable and stimulating to his associates. The dominant influence of nitrogen fertilization upon cane quality was the subject of his more recent investigations, and many phases of this relationship are much better known because of his findings. After his return from Minnesota, he supplemented his earlier activity with a keen interest in the manufacture of levulose and in the possible values in some of the sugar mill by-products, and his results in this field have also attracted respectful attention.

Inasmuch as Dr. Das's work was so largely confined to sugar-cane problems, most of his generous contributions to the scientific literature appear in publications devoted to the sugar industry. Nevertheless, they were looked for and reviewed by many workers in scattered scientific organizations who had learned to recognize the intelligent insight into biological questions which they displayed.

By his death, the sugar industry is deprived of a practical scientist with high ideals of research, who still had much to offer. His associates have lost a sympathetic, constructive counselor, and his friends miss a personality that is not replaceable.

RALPH J. BORDEN

LEO D. WHITNEY

THE untimely death of a faithful and cheerful friend is always a personal tragedy. When such a man has had proper technical training, is industrious and successful in his sincere search for truth, his early passing is a distinct loss to science. Leo David Whitney, assistant agronomist with the Hawaii Agricultural Experiment Station at the University of Hawaii, was such a man.

Mr. Whitney, graduate of the University of California with a B.S. degree, was born in Santa Rosa, Calif., on May 11, 1908. During his two years' stay in the Hawaiian Islands he concentrated on the study of taro, *Colocasia* (*Caladium*) *esculenta*, the staff of life of the Polynesians. He visited the various islands of the Hawaiian group, gathering from natives and planters eighty-odd varieties and clons for growing in experimental plots in Honolulu. These he carefully described. He rediscovered and studied the seed of taro, and successfully raised many seedlings, some

with decided commercial possibilities. Besides his work on taro, he had become the acknowledged authority on the native and introduced grasses of the Islands. He published several novelties in this field and had far advanced in his manuscript on local range grasses. His monograph on the seeds of the genus *Pinus* is ready for publication. His various interrupted researches will be completed by his colleagues and shortly appear in print.

He died on November 7, 1937, after a week's illness in Honolulu, his short span of life crowded with achievement. Surviving are his bride, Mrs. Jacqueline Mitchell Whitney; his mother, Mrs. M. Emmons Whitney; two sisters and a brother, all of California.

O. D.

WAIALUA, T. H.

RECENT DEATHS AND MEMORIALS

DR. CHARLES MORTON SMITH, dermatologist and professor emeritus of syphilology at the Harvard Medical School, died on January 8 at the age of seventy years.

SIMEON E. BOOMER, for twenty-five years head of the department of physics and astronomy at the Southern Illinois State Normal University, died on January 3 at the age of sixty-three years. He was a member of the Illinois Education Association and of the Illinois Academy of Science.

DR. ALFRED BARTON RENDLE, for many years keeper of the department of botany in the British Museum, died on January 12 at the age of seventy-two years.

JAMES L. STARKEY, the well-known British archeologist, recently was shot and killed by Arabs while he was driving in his automobile near the village of Beit Jibrin. He was fifty years old.

Industrial and Engineering Chemistry states that to honor the memory of the late Julius A. Nieuwland, and to carry on the scientific research which he inaugurated, the University of Notre Dame has established the Julius A. Nieuwland Memorial Foundation. Its aim is "to continue projects already instituted by the man whose discoveries made possible the manufacture of synthetic rubber on a commercial basis, and to seek other outlets for pure research which, if successful, will redound to the benefit of American industry and workers." The foundation proposes the following immediate objectives: a chair of organic chemistry, $125,000; a visiting professors' endowment, $125,000; five research fellowships, at $25,000 each, $125,000; a lecture foundation endowment, $50,000; a library and research materials fund, $75,000; and a chemistry laboratory building, $500,000. The initial gift of $10,000 came from the Chemical Foundation, Inc., and a number of additional gifts have been received. Gifts are to be held in perpetuity under the administration control of a board of lay trustees.

A MEMORIAL program honoring the life and work of Madame Marie Sklodowska Curie, co-discoverer of radium, was held at Columbia University on January 20. Count George Potocki, ambassador from Poland to the United States, and Dr. Francis Carter Wood, director of the Crocker Research Laboratories, were among the speakers. Dr. John Dyneley Prince, Columbia professor emeritus of east European languages and formerly Minister to Jugoslavia and Denmark, presided.

SCIENTIFIC EVENTS

THE DANISH NON-MAGNETIC RESEARCH SHIP

The New York Herald Tribune gives the following account of the new vessel *Dana,* constructed for the Government of Denmark, which is to be added to the fleet of research ships employed by maritime nations for oceanographic study from which are mapped accurate charts of navigable waters.

It is stated that the British Admiralty has a non-magnetic research ship in construction which will serve as a replacement for the American non-magnetic ship *Carnegie,* of the Carnegie Institution, which was destroyed by an explosion several years ago.

The new Danish vessel, costing 1,000,000 krone (about $440,000), is 147 feet long and is equipped with a large deckhouse containing three laboratories, lounge for the scientific staff, officers' mess and pantry. A teak house on the bridge deck contains chart room and master's quarters. Six cabins are provided for the investigators. The vessel has a double bottom with special fuel tanks to permit two months of uninterrupted sailing.

Driven by a 700-horsepower engine giving her a speed of twelve knots, the ship has been equipped with a special clutch arrangement which will transmit power from the engine shaft to the propeller shaft in such a way that the screw is electrically actuated at very low speeds. In this arrangement the ordinary connection between the engine and propeller is interrupted and the propeller shaft is driven through a reduction gear by an electric motor fed by a large generator coupled to the main engine. Equipment also includes an echo sounder, gyro-compass, wireless-direction finder and radio station, including telegraphy transmitters for short waves and a radio telephone transceiver.

Magnetic charts have been published. The new