

due to hydrographical and, in turn, to astronomical tide-producing conditions. At a certain rare configuration of sun and moon, he said, great under-waves rolled into the Baltic from the ocean, and brought the herring where they now no longer come. At the same time the fresh waters were reduced to a shallow surface-layer, so apt to cool down and freeze that severe winters and a frozen Baltic were a common thing. All this work of Pettersson's is extraordinarily interesting; but it is very complex and very difficult, and perhaps the time has not yet come to judge it.

Pettersson and his friends were pioneers of oceanography, and it was they who brought a little company together in Stockholm, in 1899, to plan the international "Exploration of the Sea". Nansen was there, and John Murray and Otto Krümmel; Cleve was there, once a famous chemist, now one of the chief students of the micro-fauna of the surface of the sea; Gustav Ekman came from Gothenburg and Victor Hensen from Kiel and Friedrich Heincke from Heligoland; and Johann Hjort and Martin Knudsen and I who write these lines were among the younger men. It was an honour and an education to be there.

Otto Pettersson lived two happy lives, as farmer and as scientific man. "I am a peasant," he was wont to say; it was the only English word he ever mispronounced. When I once paid him a visit at Holma he had some sixty or seventy beautiful Frisian cows in his model dairy, and he had lately built his laboratory on a little rocky island just over the way. The cliff went sheer down, and the workroom actually overhanging the deep water of the Gulmarfjord. The little place was full of gadgets; water could be pumped from various depths, and all sorts of recording instruments ticked away. A copper vessel floating on the surface of discontinuity rose and fell with the submarine waves, and transmitted their motion to a recording drum. In fact, the devising of apparatus was one of Pettersson's special gifts, perhaps his greatest gift of all; the water-bottle which goes by his name and Nansen's was really his. Nansen, for all I know, may have somewhat improved it, and he used it and made it known; but it was Otto Pettersson who made it first, and gave it to Nansen to take with him on the *Fram*. Pettersson was fertile of ideas, ingenious in experiment, enthusiastic over all he took in hand to do. Age did not wither him. He kept his sturdy frame, his active mind, his warm heart, his cheerful countenance, even to extreme old age.

D'ARCY W. THOMPSON.

#### Mr. Francis Druce

MR. FRANCIS DRUCE, who was killed recently by enemy action, was well known as a botanist and collector of botanical books. He was born on January 3, 1873. Educated at Harrow and Magdalen College, Oxford, he entered the long-established firm of Druce and Attlee. In 1910 he was forced by ill-health to retire from active participation in the business (from which he completely retired in 1923), and his great love of "Nature in all her moods" led his energies into the study first of meteorology, then of

his chief interest, botany. His legal experience, good judgment and methodical habits made him an ideal treasurer of scientific societies to which he belonged. In this capacity he served the Royal Meteorological Society for two periods, 1913-1918 and 1925-1932. He was treasurer of the Linnean Society of London from 1931 until the autumn of 1940, when he became master of the Innholders' Company, of which, following the family tradition, he had previously been clerk for some years. Of the Botanical Society of the British Isles he became treasurer a few years before his death, and also took over the secretaryship when the secretary was called up for active service.

Druce formed extensive meteorological and botanical libraries. The former he presented to the Royal Meteorological Society some seven years ago, but he continued meteorological observations until his death, and when travelling always carried with him a maximum-minimum thermometer. His botanical library, except for most of his rarer herbals, was in great part destroyed in the fire which followed his death: it has been the subject of an article in the "Private Libraries" series of the *Times Literary Supplement* (Dec. 31, 1938). His herbarium, which mainly consisted of British plants collected by himself during the past twenty-five years, and which included almost every British species which it is possible at the present time to see in native haunts, was completely destroyed. Since 1919 I have visited most parts of the British Isles in his company, hunting rare desiderata, these ultimately becoming reduced to the 'forlorn hopes' of almost or quite extinct species. He was intrepid on rocks, and appeared quite comfortable standing on the edge of a cliff examining the slopes below through his field-glasses, which he generally carried to observe birds, of whose song (as also of good music) he was a great lover. He acquired a very good knowledge of the British flora and had a good eye for plants, although he himself never tackled any of the critical genera and preferred others to write up the results of his expeditions. He remained unmarried, but took great interest in the boys' clubs of his parish church in Chelsea, of which he was a strong supporter. Generous and loyal, he will be missed by a wide circle of friends.

A. J. WILMOTT.

#### Dr. C. G. Lamb

WE regret to record the death of Dr. Charles George Lamb, emeritus reader in electrical engineering in the University of Cambridge, on May 4.

Born in 1867, Lamb originally wished to become a professional musician; when the early death of his father made this impracticable, he went to the University of London, where he attended courses on zoology, and for a time contemplated a medical career; but he ultimately decided to study electrical engineering at the City and Guilds College, where as a student he helped to test the first alternating current transformer that was brought to Great Britain. After graduating, Lamb went to Cambridge in 1891 to assist the late Sir Alfred Ewing in his researches on the magnetic properties of iron; in the same year

he was appointed University demonstrator in mechanism and applied mechanics, a post which he held until he was appointed University lecturer in electrical engineering in 1903.

During the War of 1914–18, Lamb acted as head of the Department of Engineering; and thereafter, in 1921, the post of reader in electrical engineering was created for him, and ceased to exist on his retirement from reasons of health, in 1931. During the forty years he was teaching in Cambridge, Lamb watched and helped the growth of the Engineering Laboratory from insignificant beginnings to one of the largest departments of the University, and he is remembered with gratitude and affection by generations of students.

One of Lamb's distinguishing characteristics was his versatility; his interests and knowledge of matters remote from his own particular work were astonishingly wide. He could hold his own in discussions on such diverse matters as history, medicine and psychical research, so that experts in each subject were astonished when afterwards told that the man to whom they had been talking was not a specialist in their own line of research. His encyclopædic knowledge, practical ability, and readiness to take any amount of trouble whenever his help was asked were of great value to his friends, and to the University, especially in his capacity of a syndic of the University Press, an office to which he was repeatedly elected for many years.

Lamb spent most of his spare time in collecting and studying insects. He specialized on the flies, working for some years with Dr. David Sharp, and such was his ability in this direction that he became a recognized authority on certain groups of the Acalyptera, especially the Ephydridæ and the Drosophilidæ, describing many new species. He was a real naturalist, and was a mine of information on the habits and life-histories of the insects he studied. His most important research was the study of the Diptera of the Seychelles, of the 428 species of which 28 genera and 311 species were previously unknown. He also did most valuable work in the Insect Department of the University Museum of Zoology, where he was in effect honorary curator of the Diptera for many years. For his zoological work, the University conferred upon him the degree of Sc.D. in 1923, and on his retirement from the Engineering Laboratory in 1931 he was created emeritus reader in electrical engineering.

Lamb never lost his early interest in music; although of late years even his most intimate friends could seldom prevail on him to play to them. As a freemason, he was a well-known figure in both town and University, and attained high rank. As a lecturer, he sometimes failed to appreciate that his mind worked faster than that of any but the most able of his audience, but he never grudged the time to explain privately any difficulties. To Cambridge zoological research he was for twenty years the valued referee whenever mathematical conceptions were involved. No student, colleague or friend ever asked his help in vain.

C. R. C.

### Mrs. Beatrice Bateson

THE recent death of Mrs. Beatrice Bateson, widow of William Bateson, F.R.S., has meant more than the loss to her own immediate friends. A link with the past has been broken, and many of his former pupil and colleagues will recall the integral part she played in those memorable days at Grantchester or Merton—a Saturday afternoon, a Sunday lunch—where the sense of intellectual freedom and curiosity, the spaciousness and the humour, were of her making as well as of his. She was always there to help, whether it was Japanese prints, embroideries, a display of home art, the chicken-pens or the greenhouses that formed the absorbing interest of the moment.

In recent years, when her own talents and her own energy had to stand alone, Mrs. Bateson's labours were mainly threefold; she made her garden in Sussex a delight, and with her needle she produced embroideries of great beauty of design and execution. But more important than trowel or needle was her piano; even within a few months of her death, under able and kindly guidance, she was mastering the intricacies of Bach with the enthusiasm and intensity of youth.

To Mrs. Bateson is due the biographical sketch of her husband, published in 1928: "William Bateson, F.R.S., Naturalist, His Essays and Addresses, together with a Short Account of his Life", which must form an important work of reference to some future biographer.

Of their sons, the eldest was killed in the War of 1914–18, and the second died in London shortly after. Gregory Bateson, the anthropologist, now working in America, is the youngest and only surviving son. Mrs. Bateson was the third daughter of Dr. Durham.

Her single-minded devotion to the things of the mind will remain embodied in the memory of her music-room in Sussex—the adapted bakehouse of the small Mill House. Two grand pianos of the smallest size could just fit in; on the window-sill stood a pot or two of her orchids, while one window looked straight into her beloved miniature greenhouse. On the walls and in the book-cases were many treasures, ranging from Blake to the Chinese, each eagerly acquired in the early days, each loved for its own sake and for its associations. In that room was no place for ignorance or for idleness.

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We regret to announce the following deaths:

Mr. E. O. F. Brown, president of the Institution of Mining Engineers, on May 22, aged fifty-nine.

The Right Hon. Lord Cadman, G.C.M.G., F.R.S., Chairman of the Anglo-Iranian Oil Company, Ltd., and the Irak Petroleum Company, Ltd., emeritus professor of mining and petroleum technology in the University of Birmingham on May 31, aged sixty-three.

Prof. Oskar Loew formerly professor of plant physiology in the University of Berlin, aged ninety-seven.

Dr. R. Campbell Thompson, F.B.A., Shillito reader in Assyriology in the University of Oxford, on May 23, aged sixty-four.