

Eruption on Tristan da Cunha, 1961-62" (20 min, colour and sound; hire 25s.), which was prepared largely by members of the Society's expedition to the Island during October 1961-March 1962; "South from Chiloé" (40 min, colour and sound; hire 42s.); which was prepared by the Society's expedition to Southern Chile during October 1958-February 1959; "Halley Bay" (20 min, colour and sound; hire 25s.). All films are available from the Executive Secretary, Royal Society, Burlington House, Piccadilly, London, W.1.

Marshes and Wetlands of Europe

IN recent years, improved machinery has made draining and reclamation of marshland and wetland a practicable proposition, and these areas are rapidly dwindling in Europe. According to the International Union for Conservation of Nature and the International Wildfowl Research Bureau, not enough thought has yet been given to the loss and damage which such drainage policies incur. The case for marshes and wetlands is set out in a booklet entitled *Liquid Assets* (Pp. 16. London: International Union for Conservation of Nature, 19 Belgrave Square, 1964). It is considered that there is an urgent need to preserve these areas, which, it is emphasized, are in many cases natural assets. Land drainage, undertaken at public expense, is a form of farm subsidy, and admissible only if it compares favourably with other means of stimulating food production. The 'worthwhileness' of a project must be assessed not merely on expected cost and profit, but on long-term advantages and disadvantages. Wetlands provide an unlimited field for biological research, and marshes, especially those on the coast, are among the most naturally fertile areas in the world. The booklet considers that if such areas are destroyed great opportunities will be lost for discovering and possibly exploiting new sources of food. Besides their amenities value, such areas are invaluable in teaching and demonstrating the elements of zoology and botany—especially ecology. Governments throughout the world would do well to take stock of their marshes and wetlands in the light of this publication and ensure that their dwindling 'liquid assets' are not only protected but also conserved.

The Wildlife Youth Service

THE Wildlife Youth Service has developed into a nation-wide organization with nearly 18,000 individual members since it was launched in May 1963. A further 10,800 members are represented through the 700 registered school groups—and applications are still steadily flowing in at the Headquarters Office, 37 Hertford Street, London, W.1. The launching of the Service was planned to take place in three phases: the first included the National Nature Week, followed by four months recruiting of individual members. The second phase—the School Group Scheme—was opened during the first week in October. This has already produced encouraging results with 700 school groups registered and more to come. These groups, many of which exceed a membership of 200 children, are being organized with the aid of interested teaching staff. Most of the groups have entered into one of the 'wildlife study' projects and activities suggested by the Director. The third phase is scheduled to take place in a few months time, when every effort will be made to set up permanent evening centres for Wildlife Ranger and Panda members throughout Britain. So far, the Wildlife Youth Service has arranged seven major film programmes for schoolchildren at cinemas in England, Scotland and Wales; these have been attended by a total of 8,200 children. The Director has given talks at 127 schools to a total of more than 10,650 children. The Information Service has dealt with more than 5,000 questions on wildlife and pet care, and the Wildlife Youth Service has sent out a total of more than 61,000 letters in thirty weeks since it was first launched (*News for Naturalists*, 5, No. 2; 1964).

National Heron Census

TEN years have elapsed since the last national heron census was carried out, and now the British Trust for Ornithology has announced that a further attempt is to be made to count all the herons' nests in Britain. In addition to the usual factors which have always affected the heron population, the position is now being complicated by the effects of toxic chemicals, and hence it is important to make this census as accurate as possible. Ornithologists in England and Wales wishing to help in the new census should contact Mr. J. Stafford, Westering, Moor Lane, Brighstone, Isle of Wight; those in Scotland should contact Mr. C. P. Rawcliffe, 35 Comely Bank Road, Edinburgh, 4; and those in the Irish Republic, Mr. O. J. Merne, c/o National Bank Ltd., Rathkeale, Co. Limerick, Eire.

New Words in Biology and Related Subjects

DR. N. W. PIRIE, head of the Biochemistry Department at the Rothamsted Experimental Station, has prepared a preliminary list of words for inclusion in the proposed *Biological Council Dictionary* of new words in biology and related subjects (*Institute of Biology Journal*, 2, No. 3: August 1964). Of the 96 words submitted, none is included simply because it is rare: a word is excluded if it appears, in the sense with which biologists are concerned, in the *Oxford English Dictionary* or the eighth edition of Henderson's *Dictionary of Biological Terms* (1963). The rule is interpreted flexibly when the spelling has altered. Words that do not seem to have been used by anyone except the coiner are not included unless it seems likely that they will catch on. On the other hand, inclusion or exclusion are not intended as comments on the usefulness of the words; there will be time enough for comment after the first definite list has appeared. The names of individual organisms, diseases and substances are excluded because they are easily found in the abstract journals; only names of categories are recorded. Among the words are:

Actinophage—an anti-actinomycete phage.

Air spora—the population of air-borne particles of plant or animal origin, including pollen.

Aposymbiotic—removed from symbiosis or separated from the symbiotic partner.

Cryptobiosis—the state of an organism when it shows no life-like activities while still being capable of resuscitation.

Darwin—the rate of evolution of a quantitative character, the natural logarithm of which changes by unity in a million years.

Epontic—growing on any surface, plant, animal or mineral. A broader term than epilithic or epiphytic.

Euphenics—the improvement of individual people by chemical or surgical means. Analogy with eugenics in the sense that phenotype is opposed to genotype.

Gangliospor—a fungal spore developed from the swollen tip of a hypha.

Kronism—the killing (and sometimes eating) of eggs and nestlings by the parent bird.

Lomasome—a sponge-like structure in fungi contiguous with the hyphal wall as revealed by the electron microscope.

Poxvirus—a group of viruses of complex structure, 200-300 nm in diameter, usually causing lesions involving skin in birds and mammals (includes vaccinia, variola and various animal poxes).

Tachyphylaxis—the diminishing response to successive doses of any material active in biological systems.

Teleonomic—a neutral word implying that an adaptation is useful for achieving a certain result without the implication that design of purpose was involved.

Trophogenic—the surface layer of a body of water in which photosynthesis can occur. Also used for an effect produced by feeding.

Bakery Planning

No baker intending to build new premises, or to expand or modernize his existing bakery, has had cause for complaint since June 1964. For since then there has been available for the would-be planner a comprehensive guide

published by the British Baking Industries Research Association at the modest price of 10s. (Report No. 72: *Some General Principles of Bakery Planning*. By Mr. D. E. Chapman and Miss E. M. Laing. Pp. ii+82. Chorleywood, Rickmansworth: British Baking Industries Research Association, 1964. 10s.). It may be added that the British Baking Industries Research Association reports are not normally available to the public, but an exception has been made with this one, as it was felt to be one of general interest. The report attempts to answer in advance and in order the questions which an intelligent baker would ask in these circumstances. Thus, after some preliminary advice to the baker confronted with the dilemma of whether to adapt his existing bakery or build an entirely new one, the authors guide him through the intricacies of site-choosing, and introduce him to the complexities of lay-out and planning. The foreword makes it clear, however, that, except for small projects, he will need the services of an architect; and the report is intended to help in the liaison with the latter rather than to displace him. The design of individual parts of the bakery is discussed in detail, and includes ancillary services such as the despatch area, test-laboratory and boiler room: even the refuse store is not forgotten. Special attention is directed throughout to considerations of safety, to comfortable working conditions, and to the reduction of unnecessary labour: reference is made in an appendix to appropriate legislation.

Hydatid Diseases in New Zealand

HYDATID disease in New Zealand is as old as the sheep industry. A circular from Dunedin in 1887 to medical practitioners revealed that nearly all, even at that time, had wide experience of the disease. Such a well-entrenched disease will not readily be overcome, and reports of past efforts at eradication are conflicting. It was with this knowledge that the National Hydatids Council asked Dr. F. S. Maclean to write a history of the fight against hydatid disease in New Zealand (*Hydatid Disease in New Zealand: an Account of the Events leading to the Establishment of the National Hydatids Council, and the Methods adopted to Eradicate the Disease*. By F. S. Maclean. Pp. 48. Wellington, N.Z.: National Hydatids Council, 1964). The lessons that emerge from his report are striking, and they are useful in fields far wider than hydatid prevention alone. First, there has been no sudden or dramatic advance in medical knowledge. The methods advocated in the 1880's—never to allow dogs to feed on raw offal—are just the same as those advocated to-day. Secondly, the problem is one of people rather than dogs and other animals. For nearly a hundred years many efforts have been made to bring knowledge of hydatid disease and the methods of prevention to all New Zealanders, and many thousands of pounds have been spent. On two occasions at least, regulations have been framed and passed to stop dogs eating raw offal. As a result, many thousands of New Zealanders knew the truth about hydatid disease but took no action to check it. Some felt that any action taken by the individual was made useless by the carelessness of others. Some had a quite unrealistic belief that dosing with arcoline would, in some miraculous way, relieve them from the responsibility of preventing their dogs from eating raw offal.

In spite of every effort by the Government, the various Government departments, the medical schools, the research units and the medical profession, hydatid disease continued to take its yearly toll of health and life. Apathy and hopelessness fed on confused thinking, stories of failure and avoidance of personal responsibility. As indicated by Dr. Maclean, the atmosphere in 1957 suddenly changed. There was a dramatic upsurge of interest. For the first time farmers worked individually to eliminate the disease from their own farms, they co-operated with their neighbours to form local anti-

hydatid committees, they elected members to fight the disease at a provincial level and, in conjunction with the Federation of Young Farmers Clubs, they finally prevailed on the Government of the day to form a national body to campaign against hydatid disease in all parts of the country. The change in attitude was due to participation. Farmers were told of a disease which primarily affected them and were told of methods of prevention which only they could apply. They were given responsibility for action, were asked to make their own decisions, plan their own policies and become involved themselves in a campaign they could call their own. Organizations and individual farmers devised methods of disposing of or treating offal, destroying carcasses, controlling dosing, and feeding their dogs. Local committees took the message to every local dog owner. District committees defined boundaries and co-ordinated the work of local committees. Within two years approximately 500 local committees were set up in rural areas throughout New Zealand. Later, a National Hydatids Council was formed: its success is described in the booklet.

Protein Requirements of Man

IN 1963 the World Health Organization and the Food and Agriculture Organization requested the views of experts on various aspects of protein metabolism. Following on this request a working party was set up, under the chairmanship of Prof. F. G. Young, to investigate the human requirements of protein with special reference to the dietary background of the United Kingdom; the report of this working party has recently been published (*Reports on Public Health and Medical Subjects, No. 111: Requirements of Man for Protein*. Pp. vi+90. London: H.M.S.O., 1964. 5s. 6d. net). Physiological variations which can occur in protein metabolism and regulation are dealt with in the report, which then discusses the nutritive value of proteins both in relation to the composition of the proteins and the calorific value of the diet. The relationship between different forms of biological assay of protein quality is discussed and the importance of 'nitrogen balance' methods is emphasized. Factors which affect the nutritive value of protein foods are considered and human factors which affect the requirements are discussed at length, while the effects of disease and injury are reviewed briefly. The mean lower and upper limits of dietary protein intake per day for all age-groups are summarized and suggestions are made as to the use of such data in the recommendation of protein allowances. The report concludes with a number of appendixes dealing with specialized aspects of protein supply and requirements.

The Ramsay Memorial Fellowships Trust:

Fellowships for Advanced Students of Chemistry

APPLICATIONS for two Ramsay Memorial fellowships for advanced students of chemistry will be considered in February 1965. One of the fellowships will be limited to candidates educated in Glasgow, but they can apply to be considered for both fellowships. The value of each fellowship will be £750 per annum, to which may be added a grant for expenses of research not exceeding £150 per annum, and will normally be tenable for two years.

Travel Grants

Applications for three Ramsay travel grants for the year 1965-66 will also be considered in February 1964. No travel grant will exceed £500. Two of the travel grants will be limited to junior academic chemistry staff of universities and colleges of technology or advanced technology in England, Wales and Northern Ireland. One travel grant will be limited to junior academic chemistry staff of universities in Scotland.

Further information concerning fellowships and grants can be obtained from the Joint Honorary Secretaries,