

THE RAMSAY MEMORIAL FUND.

THE executive committee of the projected memorial to the late Sir William Ramsay has now issued an appeal to the public for the sum of 100,000*l.* to carry out its objects. The intentions of the committee are described briefly in the subjoined letter, which we trust will be given earnest consideration and be made widely known among people in the position to give the financial support necessary to establish the memorial on a sound basis. The organisation of the movement for a memorial to Sir William Ramsay was described in an article in *NATURE* of May 10. The final form to be taken by the memorial will depend upon the fund obtained, but the main objects are the institution of Ramsay Research Fellowships and the establishment of a Ramsay Memorial Laboratory of Engineering Chemistry at University College, London. The sum already subscribed by Sir William Ramsay's friends, and through their private efforts, amounts to more than 14,000*l.* This includes the generous gift of 5000*l.* from Messrs. Brunner, Mond, Ltd.; 1000*l.* each from Lord Glenconner, Sir Hugh Bell, Sir Ralph C. Forster, Sir Robert Hadfield, Mr. Robert Mond, and Mr. J. B. Noble; and 500*l.* each from the president of the British Science Guild (Sir William Mather), Mr. Charles Hawksley, and Miss Lilies Noble.

The projected memorial has been conceived on a scale and in a form not unworthy of the great name it is designed to perpetuate, and it is to be hoped that the scheme will be carried speedily to completion by the good will and generosity of a very large public.

The appeal that is made has three features which deserve remark. In the first place it is perhaps the first crucial test put upon the public which will show how far the public opinion of this country, after the stimulus of things revealed by the war, has come to appreciate the worth of those who lead in the advance of science. In the second place it asks for the endowment of the study of science in special relation to its industrial application by the institution of something new in kind. Everyone admits the supreme importance for industry of a close association between chemistry and engineering. Discussion as to the possibility of a new type of university product in the form of chemical engineers or engineer-chemists has recently been eager, and no advocate has been more persuasive than Prof. Donnan, Sir William Ramsay's successor at University College, London. However opinion may differ on some aspects of the question, all will agree that there is much that may be done in the direction desired, and it will be entirely consonant with Sir William Ramsay's interests and his enterprise that first-rate provision should be made for this new experimental development of chemical education.

Lastly, the appeal, made to the whole country, asks for something that is to exist in substance only in one place. It is greatly to be hoped that

this will in no degree impede support. It is very necessary that it should be realised in connection with the highest education that there must be some localisation of special branches, and this is eminently a case of the kind. The particular centre of localisation must be determined by the circumstances of the case. Centralisation in London is not likely to be carried beyond a certain point, but in the present instance it can scarcely be considered as otherwise than appropriate, if only from the consideration that the longest and greatest labours of Sir William Ramsay's splendid career were during the tenure of his professorship at University College.

The scientific world may be confidently expected to give its utmost support to the memorial not only by subscribing to the fund, but also by bringing the scheme before all who are interested in the promotion of national development through science. We trust that the appeal for funds will meet with a ready and generous response from a large public.

A COMMITTEE has been formed with the object of raising a suitable memorial to the late Prof. Sir William Ramsay, K.C.B., F.R.S., by collecting a substantial fund to be utilised for the purpose of promoting chemical teaching and research.

The committee, after prolonged and careful consideration, has resolved to aim at raising a sum of 100,000*l.*, and to devote that sum to two principal objects, viz. :—

(1) The provision of Ramsay research fellowships, tenable wherever the necessary equipment may be found.

(2) The establishment of a Ramsay Memorial Laboratory of Engineering Chemistry in connection with University College, London.

We should hesitate to ask for so large a sum of money in such exceptionally difficult times, were it not that the objects specified are objects of real and urgent national importance. The war has demonstrated in a manner previously unrealised the supreme importance of scientific, and in particular chemical, research to the national life, both in the conduct of the war and in the pursuits of industry and manufacture.

The late Sir William Ramsay was himself engaged up to within a comparatively short time of his death in various important problems concerned with the bearing of chemistry upon the war, and no one realised more completely than he the potentialities of the plans which have since been formulated by this committee as a memorial to him.

It is important that the fund should be raised speedily, so that the plans for the laboratory of engineering chemistry and the scheme for the award of fellowships may be prepared before the end of the war, and so that both schemes may begin to operate with as little delay as possible after the return of peace.

Accordingly, we desire, through the columns of your paper, to appeal to friends and admirers of the late Sir William Ramsay, to old students, and to all persons who are interested in chemistry and its application to industry and manufacture, to contribute to this great national and international memorial to the late Sir William Ramsay, and to send their subscriptions to

the hon. treasurers of the Ramsay Memorial Fund at University College, London, W.C.1.

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June 16.

THE CATERPILLAR ATTACK ON FRUIT TREES.

A GOOD deal has been heard recently about the caterpillar plague on fruit trees. There has undoubtedly been an abnormal attack in many parts of the country, and much damage has been done. In some parts of Kent, Sussex, Herefordshire, and Worcestershire orchards have been denuded of their foliage, and many more partially damaged. In many instances not only has this year's promising crop gone, but the trees have had a serious setback for next season. Apples and cherries have suffered most, but in a few districts plums have been badly invaded; currants also have suffered. In some districts visited much of the fruit was only slightly affected; some orchards well cared for, not at all; whilst others were as bare as in midwinter, and a fresh set of leaves was already appearing.

Most of the harm has been done by the Winter Moth (*Cheimatobia brumata*). In company with it has been a fair sprinkling of the Mottled Umber (*Hybernia defoliaria*) larvæ. Another "Looper" larva has done much harm in parts of Herefordshire, the Pale Brindle Beauty (*Phigalia pilosaria*), and also in Kent and at one locality in Sussex; it is usually worst in plantations near oakwoods. Comparatively few March Moth (*Anisopteryx aescularia*) have occurred. All those mentioned have either apterous or nearly apterous females, and are incapable of flight. A few are, however, carried by the males in *copula*. From several localities in Kent and Sussex numbers of Clouded Drab Moth (*Taeniocampa instabilis*) have been received; this insect appears to be becoming more harmful to fruit in the south of England.

The main damage done has clearly been due to the insects mentioned, by far the greater part by the Winter Moth, the Pale Brindle Beauty having been very harmful in a few localities only. These caterpillars have now done most of their work, but the fruit-grower is still being harassed to some extent by the Lackey Moth (*Clissiocampa neustria*) and the Little Ermine (*Hyponomeuta padella*). How far these attacks will develop it is impossible to say.

The amount of loss has been due very largely to the serious lack of labour. Many plantations have been improperly cultivated or from lack of labour, not cultivated at all. It has too often been quite impossible to spray the trees, and even

last year there were not sufficient men on many farms effectually to grease-band them. For Winter Moth and its allies two methods of treatment meet with complete success, if properly carried out, which can only be with the necessary supply of skilled labour. The first is grease-banding; the second, spraying with arsenate of lead, where the former cannot be done, as on bush trees or where such pests as the Clouded Drab Moth occur. If grease-banding on standards and half-standards is to be of any use, the bands must remain sticky from October to April, and the bands must be complete, not, as the writer has seen this year, with many breaks in them. If arsenate of lead spraying is done, then, it must be carried out at the proper time and thoroughly. Many growers have sprayed when they found the blossom trusses going and the leaves fast disappearing. This is too late, for the damage is done, the caterpillar working most rapidly towards the close of its life. Apples should be sprayed as soon as the buds are well open, and may have to be sprayed again when the blossom trusses begin to expand. One good spraying as soon as the young "Looper" larvæ are seen will save the crop, whilst to spray when all the damage is done is waste of time and money.

Most of the loss this season to apples and other fruit could, and doubtless would, have been saved had proper provision been made for the necessary skilled labour.

One other point is worth mentioning, namely, that during the winter in many districts there was a great mortality amongst sparrows. The sparrow, especially when nesting, devours Winter Moth larvæ and undoubtedly helps to keep them in check, which, however, will not make up for its many evil habits. FRED. V. THEOBALD.

PROF. T. MCKENNY HUGHES, F.R.S.

THOMAS MCKENNY HUGHES, Woodwardian professor of geology in the University of Cambridge, died at Cambridge on June 9, in his eighty-fifth year.

Hughes was born at Aberystwyth, and was the son of the Rev. Joshua Hughes (afterwards Bishop of St. Asaph), and grandson of Sir Thomas McKenny, Bart., who took a prominent part in promoting Catholic emancipation in Ireland. His brother is Bishop of Llandaff. On leaving school, he entered Trinity College, Cambridge, where he graduated in 1857, proceeding to the M.A. degree ten years later. When an undergraduate he attended the geological lectures of his predecessor in the Woodwardian chair, Prof. Sedgwick. In 1860 he was appointed secretary to the British Consul at Rome, and during part of that and the following year was left in charge as Acting Consul; but before the year 1861 closed he definitely gave up diplomacy for geology, and joined H.M. Geological Survey. He was a member of the Survey until 1873, when he was elected to the Woodwardian professorship. From that date until his death his time and energy were devoted to the cause of the Cambridge