

P. Sherwin has been transferred from the medical school, where he held a professorship in physiological chemistry, to the university. The department of chemistry in the university has been entirely reorganized with Dr. Sherwin as the head; John A. Daly and George J. Shipley are professors and Walter A. Hynes, William Wolfe and William J. Fordung, assistant professors.

DR. H. L. IBSEN, of the University of Wisconsin, has been appointed assistant professor of animal husbandry in charge of the courses and the experimental work in genetics at the Kansas State Agricultural College.

CHARLES HARLAN ABBOTT, Ph.D. (Brown, '18), has become instructor in zoology in Massachusetts Agricultural College.

MR. HUBERT SHEPPARD has been elected instructor in anatomy in the University of Kansas.

DR. A. E. HENNINGS, formerly professor of physics at the University of Saskatchewan, Saskatoon, Canada, and more recently assistant professor of physics at the University of Chicago, has accepted an appointment in the department of physics at the University of British Columbia, Vancouver, Canada. The departmental staff as now constituted is represented by Drs. T. C. Hebb, A. E. Hennings, J. G. Davidson and Mr. P. H. Elliott.

DISCUSSION AND CORRESPONDENCE

NATURAL FIELD SANITATION IN CHINA

IN the thickly populated parts of South China there are a considerable number of people who financially are very poor; it is a constant struggle with them to obtain food for themselves and for any live stock which they may possess, such as chickens and ducks, a few hogs, or possibly a carabao. Fuel is also very scarce and such waste vegetable matter as becomes dried is promptly utilized for heating purposes. This struggle for food and fuel leads to a prompt utilization of all waste vegetable material. Small leaves, insignificant to us for this use, are picked up sometimes one by one and it is a very common sight to see small boys and girls, too small as

yet to do heavy labor, picking up or sweeping up fallen leaves for fuel. Gardens and fields therefore are usually entirely free of old decaying vegetable material.¹ In this connection an observation upon the absence of leaf spot diseases on field crops in South China is of possible interest.

Sweet potatoes (*Ipomœa batatas*), tobacco (*Nicotiana tabacum*), turnips (*Brassica campestris*), onions (*Allium cepa*), chard (*Beta cicla*), beans (*Phaseolus* sp.), carrots (*Daucus carota*) and cauliflower (*Brassica* sp.) are commonly grown in South China. Observation of these field crops has shown them to be surprisingly free from the leaf spot diseases which would ordinarily affect these crops in the United States. These observations have been at two separate periods, at both times the weather being very moist and with temperatures which would not limit development of the causal fungi. It would seem as if these farmers in their utilization of all waste material as fuel and the consequent removal of sources of infection, maintain their crops almost entirely free from these diseases. That is, apparently the absence of leaf spot diseases may be accounted for by the field sanitation, practised unknowingly by the Chinese farmers.

These observations are put forward only as an illustration of what may be called field sanitation, carried out on a large scale with apparently successful results. This would suggest that in the United States much could be gained by more careful field methods and the

¹ Professor F. H. King in his very interesting book, "Farmers of Forty Centuries," discusses the use of compost heaps very completely. The use of compost heaps containing remnants and wastes of plant material is of course a great means for the dissemination of diseases of crop plants. Since one reading Professor King's work might consider it to refute the present suggestion, it seems well to explain that in South China such compost heaps are much more uncommon than in the region around Shanghai and Shantung province, and although compost heaps have been seen near Canton they are few and do not seem to play the part in the agricultural scheme that they do farther north.

elimination of sources of infection of crop plants.

The writer appreciates the danger of generalizing upon such a subject. However the two conditions, the one a prompt utilization of all vegetable material and the other an almost entire absence of leaf spot diseases, are both so noticeable that the coincidence and suggested explanation seem worthy of note.

ATHERTON LEE

BUREAU OF PLANT INDUSTRY

A METHOD OF IMBEDDING IN PARAFFINE

THE following method of imbedding tissues in paraffine preparatory to sectioning has proven so satisfactory in routine work in our laboratory that this brief note of description is offered.

The imbedding is done in paraffine buttons formed on the surface of cold water. Melted paraffine is allowed to flow from a pipette down the side of a glass dish with sloping wall, such as a finger bowl, nearly full of water. On reaching the surface, the paraffine hardens below, forming a button still liquid above and anchored securely at one edge to the glass. The tissue is now placed in the fluid paraffine and oriented. More paraffine may then be added to thicken the button if necessary. A label is attached by its end with a small drop of paraffine. The button is then disengaged from the class by a dissecting needle and carried on the point of the latter below the surface. It is at once transformed to a glass of water inverted over a basin, where it remains until solid.

Large thick buttons may be obtained in this way without the use of glycerin, paper boats or frames. The rapidity with which imbedding may be done by this method is perhaps its chief recommendation.

LEO H. SCHATZ

REED COLLEGE

QUOTATIONS

SCIENTIFIC AND INDUSTRIAL RESEARCH IN ENGLAND

THE fourth annual report of the Committee of the Privy Council for Scientific and In-

dustrial Research has just been issued; it covers the period from August 1, 1918, to July 31, 1919. Earl Curzon, of Kedleston, the Lord President, records that during the past year the work of the Department of Scientific and Industrial Research has steadily grown in usefulness and in amount. The passage from war to peace, he says, reveals more and more clearly as it proceeds the need for the sympathetic encouragement and organization of research in every sphere of national life. Encouraging progress is recorded in several directions. Thus a marked change is observed to be taking place in the attitude of industry towards scientific research; both masters and men are beginning to recognize its vital importance. Something also has been done to increase the number of trained research workers, the demand for whose services rose rapidly not only in industries, but also in the universities and government departments. The report of the Advisory Council, signed by the administrative chairman, Sir William McCormick, describes in greater detail the various branches of the department's work. The work of the Food Investigation Board grew enormously during the year. The field to be covered is so large and the range of scientific knowledge so wide, that only a complex organization could hope to deal with the problems effectively. The board accordingly set up six committees to deal respectively with fish preservation, engineering, meat preservation, fruit and vegetables, oils and fats, and canned foods; and these committees have in turn appointed seven special committees. The therapeutic uses of oxygen, shown by recent practise to be capable of very great extension, and being actively investigated by the Medical Research Committee in close cooperation with the Oxygen Research Committee of the Department. The Industrial Fatigue Research Board was established jointly by the Medical Research Committee and the Department, the former being responsible for administration. The demands made upon the Board have far exceeded all anticipation, while industrial un-