

allows hairs, scales and bristles to maintain a natural position. It is not satisfactory for mounting alcoholic specimens, but those previously cleared in KOH may be mounted with the same ease that is experienced with fresh or water preparations.

It also makes a very satisfactory substitute for shellac in mounting insects on points, as it is colorless, unaffected by heat and holds the insect securely in many cases where the shellac mounted insect is apt to snap off.

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### STAFF ORGANIZATION OF INSTITUTIONS OF RESEARCH AND EDUCATION

PROFESSOR WHETZEL'S letter of resignation as administrative head of the Department of Plant Pathology at Cornell University, extracts from which were printed in *Phytopathology*, xii 10, October, 1922, p. 499, ought to lead to a broad discussion of the staff organization of our institutions of research and education. There is no question that our present system is archaic, a remnant of the time when our institutions were small and each department was fully served by a single scientist or professor with perhaps the aid of an assistant whose duties were strictly those of a helper.

With the growth of our institutions there has been a natural increase in the working force of the various departments, while administrative duties have absorbed more and more of the energies of the department chief, with the result that at the present time the bulk of the research and teaching is being taken care of by persons of the nominal grade of assistant, though with a minimum of direct supervision by the department head. If the only persons concerned were those to whom the system is familiar, the matter of title would be of little consequence. The system, however, is very confusing to members of the general public, who are in the habit of interpreting the titles of professional workers in terms of their own occupation. To such persons the assistant is merely a helper, a species of apprentice who has not demonstrated the capacity for independent work, and one who remains an assistant indefinitely is looked upon as a failure in his profession. Not long ago I was discussing the merits of a certain research worker with a man of wide business experience when I was interrupted by the remark: "But he is only an assistant. He hasn't arrived." Need we marvel that men of this type are so often suspicious of the education which has been so largely imparted by the assistant professors of our colleges? Is it strange that the hard-headed business men who inhabit our legislative halls go slow in providing support for research

to be carried on by apprentices? And how are we to regard the farmer who, having written for information to his state experiment station and receiving a perfectly good letter signed by an assistant, feels that his request has been slighted, loses confidence in the institution and fails to write again?

Thus it follows that young men of real ability as teachers or investigators, if they are to gain proper recognition and an adequate salary, and if they are to gratify a laudable ambition for accomplishment, are forced into commercial lines or obliged to seek administrative positions when they may have but moderate administrative talent and would be happier and more successful could they pursue the occupation of their choice. As the demand for administrators is limited, the result is discontent and frequent changes of personnel. Evidently there is a feeling abroad that the present form of organization might be improved. Many of the larger universities have established full professorships other than those occupied by administrative department heads, but this practice does not abound to as great an extent as could be wished. The appointment of associates and subsidiary research men has served as an expedient to get around the difficulty. No doubt many of the heads of our institutions would be glad to give their men greater recognition if they could do so without appearing to degrade the professional title by associating it with an inadequate salary, and there are certainly numerous departmental heads of broad enough mind to see no loss of prestige to themselves in an increased recognition of their associates. Probably reforms in these respects may best be brought about by degrees, and Professor Whetzel's suggestions, if not too strictly interpreted, have a good deal of point as a step taken by one on the inside. May we not hope that when many of the so-called assistants shall find themselves in positions of administrative authority, means may be found for further progress in organization reform?

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### QUOTATIONS

#### THE BRITISH NATIONAL TRUST

YESTERDAY the National Trust added another interesting possession to its steadily growing list. Lord Ullswater accepted, on its behalf, from the Norfolk and Norwich Naturalists' Society an island of some twelve hundred acres of sand-dunes and saltings on the Norfolk coast, the protection of which has long been desired by all lovers of birds and flowers to whom it was known. Such a place finds its natural guardian in the Trust, whose work at Wicken Fen, Blakeney Point, and elsewhere has already won the

confidence of those who are alive to the importance of saving our Nature reserves before it is too late. The task of protecting such properties from the dangers which threaten them is not an easy one, even after they have been acquired, as was hinted in the account of Scolt Head given in our columns on Thursday. But the first step is their purchase, and it is satisfactory that that step has again been successfully taken and another home of wild life added to the secured treasures of the nation.

Few societies have gone more steadily forward, even during the last nine difficult years, than the National Trust. It is not yet thirty years old, but in a very short time it won such public confidence that it received special powers under its own Act of Parliament; and it has now more than a hundred properties of one kind or another. What is more remarkable is that nearly half of them have been acquired during the lean years which have followed 1913. Of course a hundred is a mere drop in the ocean of "places of natural beauty or historic interest" which it would be desirable to see in the hands of the Trust. But it is a beginning, and a beginning which has grown fast, and promises to grow still faster. The truth is that the growth of the Trust is partly the result and partly the cause of a change in public opinion. A hundred, and even fifty, years ago buildings of the greatest historic or architectural interest were destroyed, places of exceptional beauty were built over or otherwise ruined, and scarcely a voice was heard in protest. Such crimes, or follies, are still committed, though much less often; but now they never fail to arouse public indignation. The whole movement demanding the preservation of great architecture and the protection of beautiful landscape has gathered greatly increased force since the foundation of the Trust. The original Ancient Monuments Act has been largely extended: a permanent Commission on Historical Monuments has been appointed, and has already published its survey of several counties; a Society for Nature Reserves has been founded; many dioceses have established committees for the care of their churches; and the National Trust itself has become the owner of one or two large and many small historic houses, several properties having associations with such great names as those of Gray and Wolfe and Coleridge, and some thousands of acres of the most beautiful open land in the country, including a large part of the shore of Derwentwater and other properties adjoining Ullswater and Windermere. Such achievements are proof of the strength of the movement and a sure promise of its future development. *Vires acquirit eundo*. What is done to-day will be doubled to-morrow. But the need is doubling, too. Time and man are always engaged in the work of destruction, and an always increasing

population is always needing more open spaces. However fast the Trust grows, it is certain that it will not, at least in our time, overtake the calls made upon it.—*The London Times*.

## SCIENTIFIC BOOKS

*A History of Magic and Experimental Science during the First Thirteen Centuries of our Era.* By LYNN THORNDIKE, Ph.D., professor of history in Western Reserve University. Two volumes, I. xl. 835, II. vi. 1036. New York, The Macmillan Company. 1923.

PROFESSOR THORNDIKE'S book of two volumes and more than 1800 pages will easily take the lead of all that has been said of the intellectual conditions of the period of which it treats. It stretches across the centuries from the time of Pliny and Galen to the time of Dante. This is a period of depression in the history of thought in its various phases, of which several writers in this country have studied the details in notable works. To those few still active who in their younger days may have entered the subject through the fascinating pages of Draper's "Intellectual Development of Europe" and are still attracted by the subject, this product of Thorndike's labor will be especially of interest as exhibiting the steps forward in scholarship and in the energy and enterprise of research which it exhibits. The work of Lea on the activity of the "Inquisition in the Middle Ages" and the more recent one of Taylor on the "Medieval Mind" are treasure houses, somewhat dreary, it must be confessed, for the future student, but this book of Thorndike's, for fullness and completeness of reference, for excellence in presentation, for thoroughness of scholarship, leads them all. The reviewer is not familiar with any recent works in this field in foreign languages which can be compared with it. The preface reveals in outline the vast labor undergone, as intimated by the author, and the diligent reader on finishing it will find the author has not exaggerated it, indeed his modesty has not done justice to it in his own account.

In a subject so dull, even so repellent to many readers, he has labored to relieve the tedium of perusal by many touches of humor, but there might well have been more of them, for the record is a long and tiresome one—a record of the imbecility of the human mind at its worst since it has found a method of perpetuating its workings in cursive script. An essay on some aspect of the subject of magic may be made attractive by picking out the high points which allure, but to write an exhaustive and at the same time an attractive compendium of it is another matter. To combine with it an exposition of the springs of what we call experimental science makes it a task