

from central body to the less numerous class and from this in turn to the more numerous, any device that would strengthen the relation between the central body and the publishers would be useful. Thus, it might be well for the Royal Society to furnish sets of cards pertaining to the specialty represented by the non-commercial publication, either in exchange simply for the periodical transmission of summaries or in return for such summaries and for printing in the advertising pages or elsewhere a standing notice of the Royal Society catalogue. The coöperation of the publishers in securing, and indeed in editing, the summaries would be highly desirable, partly because with most writers summaries or abstracts need editorial scrutiny more sadly than their ordinary writing. It may be noted also that in these days of the making of many bibliographies there is a special need for abstracts and summaries for a wide variety of purposes, and the recognition of this need will make easier the way of the Royal Society in putting its plans into execution. Partly for this reason there would seem to be a certain desirability in printing the brief summaries, perhaps in a distinctive type, in conjunction with scientific articles.

The Geological Society of America recently concurred in a report to the Royal Society conforming to that of the Harvard University Council, with a brief addition designed to facilitate obtaining summaries of articles from non-commercial publishers of scientific literature, this addition having been suggested by the writer as one of the committee on the subject.

W J McGEE.

TEACHING BOTANY ONE TOPIC AT A TIME,
ILLUSTRATED BY SUITABLE MATERIALS
AT ANY SEASON OF THE YEAR.

EDITOR OF SCIENCE—*Sir*: The recent papers in SCIENCE concerning the manage-

ment of classes in botany prompt the following. In these times, of course, every true teacher of botany insists that his pupils shall study the objects before receiving much, if any, instruction from books or persons. I take it for granted that any teacher of a class beginning subjects that are treated in *Gray's Lessons* would prefer to take them up in about the sequence there given, but he will find it impossible to procure at any season of the year enough suitable material that is fresh to fully illustrate many of the sections of the book. For example, he cannot procure at any one time suitable materials to illustrate the section on stamens. The varieties there illustrated appear at different dates some weeks apart. So of the forms of pistils, the torus, fruits, etc. My plan has been to collect quantities of stamens of the barberry, sassafras, lobelia, cypripedium, mallow, locust, dandelion, lily, tulip tree, blueberry, sage, milkweed, and in most cases preserve each kind by itself in twenty-five per cent. alcohol, or in formalin one hundred of water to one of formalin. These are ready when we want to study stamens. A specimen or more of each kind of the preserved objects for illustrating any section of this subject can be placed in a small dish before each pupil in case fresh specimens cannot be procured. In many instances, when not allowed to dry, these can be gathered up and used for several successive classes.

In like manner, it is very satisfactory to be able, when fruits are to be studied, to have a good many kinds to illustrate the various sorts, such as half grown plums or cherries, the mandrake, bloodroot, violet, mulberry, winter-green, etc. Lessons in morphology can, in this way, be made more impressive than when some of the illustrations are used in one day and others in a week or a month.

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