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SCIENCE, SCIENTISTS AND SOCIETY[1]

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THE subject selected for this address—"Science, Scientists and Society"—is indeed formidable, at least to any group assembled for an occasion such as this. On the one hand, the range is nearly limitless; and, on the other hand, time and the ability of the speaker are definitely limited. Then, too, triteness is a handicap, for often equivalent subjects must have served many a commencement speaker needing a non-committal title for his remarks.

Nevertheless, the choice was made deliberately, since previous addresses by chemists before this academy have all been very general in nature. Formulas and equations, the chemist's indispensable form of sign-writing, have been almost entirely avoided. In following this precedent it seemed wise to reject as possible subjects various aspects of analytical chemistry, my principal field of research. In a more positive direction, the choice was made because of a feeling that what is most fundamental in science for a chemist is equally fundamental for other scientists. Whatever interest the discussion may have, therefore, should be general.

[1] Address presented by the retiring president of the Indiana Academy of Science at the fall meeting, October 30, 1942.

THE PROBLEM

Many years of teaching and research have aroused a personal desire to know, as far as possible, the essence of the scientific activity to which most of us are devoting our lives. Just what is science? Is it a kind of religion, sufficient in itself as a way of life in modern society? If all were trained in science, would we be able to live together happily thereafter? Possibly what I have in mind may be clearer in the form of another question—What does science mean to me? Obviously, the answer to be proposed is entirely personal. My only justification for presuming to present it is the

Results in pineapple fields did not make themselves evident for over a year after treatment, indicating that the soil disinfection, apart from its immediate effect in reducing populations of harmful organisms, had also affected the soil complex in such a way as to permit the plant to gradually show increasing improvement over the untreated checks. This was in direct contrast to the results with chloropicrin which, as usual, manifested themselves earlier with a dark-green growth typical of pineapple plants grown in chloropicrin-treated soil.

It is probaly true that the broad function of treatments such as these is to amend the biological complex of the soil so that the end result expressed in terms of plant health and plant yield is favorable. Biological complexes in the soil may be radically changed through the elimination of some specific organism and the suppression or stimulation of others. Such changes may be as significant for the end result as the initial effect on the specific organism, particularly if the crop in question is slow in maturing.

Much experimental work remains to be done on the effect of the treatment on specific organisms, the range of practical dosages for varying soils and weather conditions and the possibilities of treating soil around growing plants. When the pineapple plant is used as the test plant in such experiments the final results are slow to accrue, but since the material (called D–D mixture for short) has such great potential usefulness for other more rapidly maturing crops in a great many agricultural areas, it seems advisable to present the preliminary results at this time so that these potentialities can be fully explored.

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A SIMPLE BIRD HOLDER FOR USE IN AVIAN MALARIA STUDIES

WE wish to describe briefly here the canary holder which has superseded in our laboratory the one described a few years ago (SCIENCE, 88: 114, 1938). The new holder (see sketch), which has the great advantage of not injuring a bird, consists essentially of a thin brass tube of a size that a canary can be snugly fitted into, altered as indicated below.

In what is to be the hind end a notch is made about five eighth inch wide and one quarter inch deep with holes so placed in each corner that a straight wire can be passed through both of them. Just above each of these holes a slight perpendicular groove is filed on the outer surface of the tube to serve as a lock for the handle of the key which is made of half-hard brass wire.

Thin galvanized iron sheet metal is soldered across the other end and a portion bent forward to form the headrest.

The bird is inserted slowly into the holder until its head protrudes from the opening in the front end and it is then held in position by inserting the key above

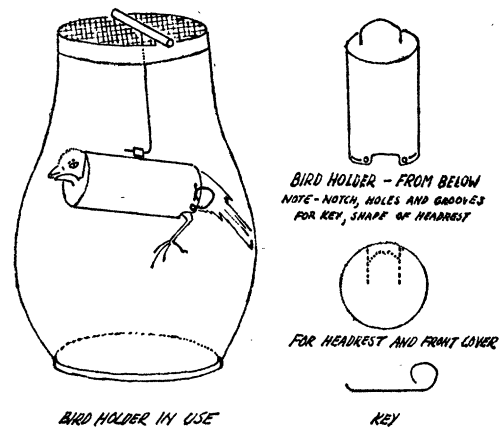

FIG. 1.

the legs dangling from the hind end and locking it in place. The holder and its contained bird are then suspended in a globe with mosquitoes.

ROBERT K. OTA
HARRY BECKMAN

MARQUETTE UNIVERSITY SCHOOL
OF MEDICINE

BOOKS RECEIVED

DULL, CHARLES E. and MICHAEL N. IDELSON. *Fundamentals of Electricity.* Illustrated. Pp. xx + 456. Henry Holt and Company. $2.00.

DULL, CHARLES E. and IRA G. NEWLIN. *Fundamentals of Machines.* Illustrated. Pp. xvi + 547. Henry Holt and Company. $2.00.

BARKER, ROGER G., JACOB S. KOUNIN and HERBERT F. WRIGHT. *Child Behavior and Development.* Illustrated. Pp. viii + 652. McGraw-Hill Book Company. $4.00.

Carnegie Institution of Washington Year Book No. 41. Pp. xxxii + 309. Carnegie Institution of Washington.

Contributions to Embryology. Volume XXX. Carnegie Institution of Washington Publication 541. Illustrated. Pp. v + 245. Carnegie Institution of Washington. $5.00, cloth binding; $4.50, paper binding.

HARTKEMEIER, HARRY PELLE. *An Introduction to Managerial Business Statistics.* Illustrated. Pp. xiv + 207. Thomas Y. Crowell Company. $1.75.

LINDSAY, ALEXANDER D. *Religion, Science and Society in the Modern World.* Pp. 73. Yale University Press. $1.50.

NEEDHAM, JOSEPH. *The Teacher of Nations. Addresses and Essays in Commemoration of the Visit to England of the Great Czech Educationalist Comenius, 1641.* Pp. 99. Cambridge University Press. The Macmillan Co. $1.75.

NEWMARK, MAXIM. *Dictionary of Science and Technology in English, French, German and Spanish.* Pp. 386. The Philosophical Library, Inc. $6.00.

RICKETT, HAROLD WILLIAM. *The Green Earth, An Invitation to Botany.* Illustrated. Pp. 353. Jaques Cattell Press. $3.50.

WIENER, ALEXANDER S. *Blood Groups and Transfusion.* Illustrated. Pp. xix + 438. Charles C Thomas. $7.50.