tulip poplars. Since then the rods have been installed on Norway spruce, red oak, white oak, black hemlock, linden, elm and other types of trees. In all 61 trees have been protected. Nine of these trees had been struck one or more times before the installation of the rods. Since the installation of the rods no one of the 61 trees has been struck. Two cases have been reported in which a tree in the neighborhood of the protected trees has been struck, the protected tree remaining immune; in one case, at a distance of 280 feet, and in another at a distance of 150 feet.

The vagaries of lightning discharges and strokes are well known. The only certain and permanent protection would be some approach to the Faraday cage. The experience described above, however, would seem to indicate that the simple protective measures described afford a high degree of protection to trees.

J. B. WHITEHEAD
THE JOHNS HOPKINS UNIVERSITY

INDUSTRIAL JOBS FOR PSYCHOLOGISTS

AT the present time the number of academic posts is being curtailed, while in industry a drive to create jobs for the unemployed is in effect. It is logical, therefore, to expect that a certain percentage of the younger psychologists may find places for themselves in positions outside the colleges and universities.

Industrial executives do not telephone or write to college placement bureaus for a psychologist to fill a vacancy. Because of various popular misconceptions that have grown up around the name, psychology may mean anything to the uninitiated. In the average employment office it would not be an asset to announce that one is a psychologist. Since business men are not going to ferret out the academic psychologist and lure him into industry, the unemployed psychologist must apply for work in person.

For the employment interview it is a mistake to go armed with a thesis and to discuss in detail a problem that may be out of the range of interest or understanding of the man who is doing the interviewing. It is a mistake to emphasize a narrow field of training, or to stress that one is looking for an opportunity to continue a particular line of investigation. The chances are that the business man is not interested in that special problem.

The psychologist who is looking for a position in industry should not emphasize the fact that he wants to work on so-called psychological problems. He should apply for work as a college graduate and should not stress his psychological training any more than he would emphasize the fact that he had had several courses in English, history or mathematics. Throughout the depression young college graduates who have made favorable impressions when interviewed have found places for themselves on industrial payrolls. They have been willing to accept every conceivable type of employment in order to gain an industrial foothold. The psychologist should not scorn a job as clerk, salesman, truck driver, laboratory helper or machine tender if it is offered to him. As an employed individual, he is in a better position to get a job more to his liking at some later date than if he has no work at all. Many employers believe that the man who is working is a better man than the one who is unemployed. The moral, therefore, is: Get on somebody's payroll, regardless of the kind of work you have to do.

No matter what the job happens to be, the psychologically trained person should find situations of interest to him. Whether he is an introspectionist or a behaviorist he can observe himself in the rôle of a worker. If he is a believer in the principles of Gestalt he will find food for thought. As a social psychologist he will be in the midst of a dynamic situation where adjustments to his supervisor and to his fellow workers must be made. As an educational psychologist he will have a chance to study his own learning difficulties and the difficulties of others. Boredom, monotony and fatigue will be brought forcibly to his attention. Problems of motivation and individual differences are present in every work situation. The competent psychologist will see the psychological problems.

After he is employed, then whatever ability and training he may have should enable the psychologist to make the necessary adjustments to insure his own advancement and promotion. He will find that many of the problems of his employer are of a psychological nature, although they may not be recognized under that classification by the management. By analyzing his employer's needs and wants, and then suggesting common-sense solutions (without using the word "psychology" at all), many psychologists should be able to create industrial places for themselves during the coming decade.

RICHARD S. UHRBROCK
THE PROCTER AND GAMBLE COMPANY
IVORYDALE, OHIO

A NEW INTERMEDIATE HOST FOR FASCIOLOIDES MAGNA (BASSI, 1873) WARD, 1917

IN a recent paper, presented before the Helminthological Society of Washington (District of Columbia), the writer reported that the snails *Fossaria modicella rustica* and *Pseudosuccinea columella* had been demonstrated experimentally to be new intermediate hosts for *Fascioloides magna*, an important trematode parasite of cattle. Since this report, another snail, *Fos-*

saria modicella, has been demonstrated experimentally to be a satisfactory intermediate host for this fluke. The time required for the completion of the intramolluscan phase of the life cycle of the fluke was 58 days. In addition to the above snail hosts, laboratory-raised *Galba bulimoides techella* have been infected with miracidia of *F. magna,* and the development of the larval forms has been studied. The time required for the complete intramolluscan development was 60 days. This report validates that of Sinitsin (1930),[1] which was based upon incomplete studies.

The known intermediate hosts of *F. magna* have the following distribution, according to Baker (1911–1928):[2] *Fossaria modicella*—Eastern Quebec, Nova Scotia, and New Jersey west to Vancouver Island; Manitoba south to southern California, Arizona, Texas and Alabama; *F. m. rustica*—New York west to Utah, Nebraska south to New Mexico; *Pseudosuccinea columella*—Nova Scotia west to Minnesota, eastern Kansas and central Texas; Manitoba and Quebec south to Texas and Florida; and *Galba bulimoides techella*—Southern United States from Kansas, Missouri and Colorado to southern Texas; Alabama west to southern California and northern Mexico. The distribution of these snails corresponds to the known distribution of *F. magna,* which has been reported in North America from Arkansas, California, Illinois, Iowa, Kansas, Michigan, Minnesota, Montana, New York, Oklahoma, Texas, Wisconsin and the provinces of British Columbia and Alberta, Canada. At least one snail host is known to occur in each area from which the fluke has been reported. Since the distribution of known intermediate hosts provides a factor favorable for a wide range of distribution of the parasite, the appearance of *F. magna* in localities other than those mentioned above would not be surprising.

WENDELL H. KRULL
ZOOLOGICAL DIVISION
BUREAU OF ANIMAL INDUSTRY
U. S. DEPARTMENT OF AGRICULTURE

WATERMELON SUSCEPTIBLE TO TEXAS ROOT ROT

ALTHOUGH the watermelon, *Citrullus vulgaris* Schrad, has been listed as completely resistant[1] and as immune or resistant[2] to the Texas root-rot disease caused by *Phymatotrichum omnivorum,* the plant has been repeatedly attacked, sometimes extensively so, in Arizona. Only a few weeks ago the writer observed a field of watermelons near Tucson which was badly spotted with the disease.

Recently Mr. Karl D. Butler, a graduate student in this department working under the direction of Dr. R. B. Streets, has proved susceptible the watermelon varieties, Klondyke, Iowa King, Iowa Belle and Pride of Muscatine, when they are planted in root-rot infested soil as well as when they are inoculated in field and laboratory. Butler used pure cultures in his inoculation studies. He found that single hyphae of the fungus may penetrate single cortical root cells, between two root cells, or that massed hyphae may be involved in the act of penetrating into the root of the watermelon. The parasite used both wedging action and softening of the wall in initial penetration.

Once inside the cells of watermelon roots, the fungus proceeded to destroy and absorb the contents. No indication of any protective substance, such as Moore believes to be present in immune monocotyledons and Turk's cap hibiscus,[3] was found. The nuclei of invaded cells were less than half the size of nuclei in adjacent, uninvaded cells.

Butler also noted the effect resulting from mixing cultures. Certain fungi and bacteria, grown in cultures with the root-rot fungus, were inhibitory in their action on the parasite. In cultures with *Trichoderma lignorum* hyphae of Phymatotrichum were checked or killed by direct attack of the former.

The paper here briefly abstracted is to be published.

J. G. BROWN
ARIZONA AGRICULTURAL EXPERIMENT STATION,
TUCSON, ARIZONA

QUOTATIONS

MAYOR-ELECT LAGUARDIA ON RESEARCH

THE election of Major LaGuardia as mayor of New York City gives interest to his record in support of scientific research. As a member of the seventy-second Congress, speaking on December 28, 1932, in opposition to an attempt to eliminate an item of approximately $39,000 from the agricultural appropriation bill, he said in part:

Mr. Chairman: Science knows no politics. Are we in

[1] D. F. Sinitsin, "A Note on the Life History of the Large American Fluke, *Fasciola magna* (Bassi)," SCIENCE, n. s., 72: 1863, pp. 273–274, September 12, 1930.

[2] F. C. Baker, "The Lymnaeidae of North and Middle America Recent and Fossil," *Chicago Acad. Sciences Special Publ.,* No. 3, 539 pp., 58 pls., 1911; "The Fresh Water Mollusca of Wisconsin," *Wis. Geol. and Nat. Hist. Survey Bull.,* 70, Pt. 1, pp. 1–507, 28 pls., 202 text figs., 1928.

[1] J. J. Taubenhaus and D. T. Killough, "Texas Root Rot of Cotton and Methods of Its Control," *Texas Agr. Exp. Sta. Bul.* 307, 1923.

[2] J. J. Taubenhaus, B. F. Dana and S. E. Wolff, "Plants Susceptible or Resistant to Cotton Root Rot and Their Relation to Control," *Texas Agr. Exp. Sta. Bul.* 393, 1929.

[3] E. J. Moore, "Growth Relations in Culture of the Cotton Root Rot Organism, *Phymatotrichum omnivorum,*" *Phytopath.,* 23: 525–537, 1933.