THE psychological laboratory at Wesleyan University has moved into larger quarters, now occupying a floor and a half of Judd Hall. Dr. Carney Landis has been made acting chairman of the department and T. A. Langlie, formerly of the University of Minnesota, has been appointed instructor.

A COURSE in electrodynamics and atomic structure will be offered in the graduate school of the University of Pennsylvania this year by Dr. W. F. G. Swann, director of the Bartol Research Foundation.

THE North Dakota Agricultural College is organizing a new department of geology, of which Dr. John E. Doerr, formerly of Pennsylvania State College, has been appointed head.

GEORGE C. SHAAD, who came to the University of Kansas from the Massachusetts Institute of Technology in 1909 to be professor of electrical engineering, has been appointed acting dean of the school of engineering and architecture, to succeed the late Perley F. Walker.

DR. MOSES GOMBERG, professor of organic chemistry at the University of Michigan, has been appointed chairman of the department of chemistry of the university.

PROFESSOR W. C. RUFUS has returned from a year with the World Educational cruise to resume his regular work in the department of astronomy of the University of Michigan. Dr. Dean B. McLaughlin, of Swarthmore College, has been made assistant professor in astronomy. Dr. Allan D. Maxwell comes to the university from Lick Observatory and Dr. Hazel M. Losh from Mt. Wilson.

PAUL L. HOOVER, research fellow in electrical engineering at Harvard University, has been appointed assistant professor of electrical engineering at the Case School of Applied Science.

DR. CHARLES C. MOOK, of the American Museum of Natural History, has been appointed assistant professor of geology in the Washington Square College of New York University.

DR. H. M. HARSHAW, of the University of Missouri, and Dr. H. A. Pagel, of the University of Minnesota, have been appointed to instructorships in the department of chemistry of the University of Nebraska.

R. W. THATCHER, of Washington University, has been appointed instructor in geology at Oberlin College. Mr. T. J. Pettijohn, who has been instructor in geology at Oberlin for two years, is now holding a fellowship at the University of California.

T. G. B. OSBORN, professor of botany at Adelaide University and consulting botanist to the South Australian government since 1912, has been appointed to the chair of botany at the University of Sydney.

DR. TOM HARE, of the Lister Institute of Preventive Medicine, London, has been appointed to the chair of pathology at the Royal Veterinary College.

DISCUSSION AND CORRESPONDENCE

OLD PROBLEMS WITH NEW ILLUSTRATIONS

IT is a truism that the scientific investigator must find his reward largely in the joy of the work itself. Material compensation is not looked for, and even recognition is a secondary matter. It would seem, however, that this very fact makes it more imperative that any one writing a general article or a text-book covering a particular field of investigation be scrupulously careful to give full credit at least to the more prominent workers in this field.

Again, we all suffer from the effects of "newspaper science"; sensational articles written by irresponsible reporters. *Science Service* was organized to combat this evil. Does not this impose upon those engaged in scientific work the moral obligation to avoid sensationalism, exaggeration and loose statements in popular articles which they write?

These are not new questions; responsibility of writers to their colleagues, to the students who use their text-books, and to the general public is a matter that has been the subject of thought and discussion for many years. My recent reading, however, has led me to consider it anew.

The astronomer is aware that the late Professor James E. Keeler, by his brilliant work with the Crossley reflector, focussed attention sharply upon the advantages of this type of telescope for certain classes of photographic observations, and that in the course of his work he directed attention to the great number of the spiral nebulae (previously regarded as rather unusual objects) and to their significance in theories of cosmogony. The astronomer knows, too, that to Professor H. H. Turner, "more than to any other man, is owing the development by which photographic methods have become the most accurate and rapid of all ways of determining differential star positions." Again, he knows that Professor A. O. Leuschner has done quite as much as any man (in America at least) to develop modern methods of computing orbits of comets and minor planets, and to increase our knowledge of the motions of these bodies.

The astronomer, I say, knows these facts, but how is the student who uses a recently issued text-book in astronomy to find them out when Keeler is mentioned only in relation to the revolution of the Rings of Saturn and Turner and Leuschner are not named at all? These are but three of the more striking omis-

sions in this particular book. Some recent books on astrophysics are quite as badly at fault in this matter. One, for example, makes no mention of Huggins, Keeler, Langley or Vogel!

Again, every astronomer is aware that the total number of stars in our stellar system is an unknown quantity, though we arrive at *estimates* of this number by extrapolation. Thus,[1] in what is probably the most careful and reliable investigation of the number of the stars that has so far been made, it is said, "the *assumption* that these formulae [*i.e.*, the formulae which represent the number to the 21st photographic magnitude] also apply to the luminous stars *beyond observational reach* leads to 3×10^{10} [30 billion] as the total number of stars in the galactic system" (italics mine). He knows that *measures* of stellar diameter are possible at present only by means of the interferometer and that these diameters when given in linear units (miles or kilometers) depend in part upon the adopted distance (parallax), which may be uncertain by 25 per cent. or more of its total value. *Antares,* for example (which is the largest star of measured diameter, unless, perhaps, *Mira Ceti* slightly exceeds it), has a diameter of 280,000,000 miles on the basis of one assumed parallax, and of 430,000,000 on the basis of another, the former being probably (but not certainly) the more reliable.

But in a recent popular article, printed in a journal of high standing and later reissued as a reprint by the observatory with which its author is connected, we find the categorical statements: "Our Milky Way system contains about fifty billion stars," and, a star is "a sphere of glowing gas varying in size from a globe not much larger than the earth to one *a thousand times larger* (italics mine) than the sun in diameter," *i.e.*, more than 860 million miles, or double, possibly treble, the value of the star of largest measured diameter.

The author also remarks blithely that "fifty billion years is but a short interval in the life of the average star," which may (or may not) be true, but is certainly not a demonstrated fact. Furthermore, he lets the reader infer, as a friend pointed out to me, that the Magellanic Clouds have recently moved so far north that their radial velocities can be and have been measured from Mount Wilson or Flagstaff!

The question is this: Is it quite fair to the intelligent public to give the impression, which the average reader will certainly gain from this article, that these figures and dimensions are matters of knowledge and on the same footing as our knowledge of the distance to the sun or of its diameter? Does not the writer of such an article owe it to his reader to make it clear that some of his results rest upon theories, assumptions and extrapolations, all of which, though they may now seem to us to be well-founded, may be subject to revision—possibly even to rejection—in the light of further investigation?

Finally, to revert to my opening paragraph: while every scientific investigator is concerned primarily with the advancement of knowledge, and not with his own fame, is it not his due to be given recognition for his work in books that record for the student the chief steps in the development of his science?

R. G. AITKEN

[1] "Mean Distribution of Stars according to Apparent Magnitude and Galactic Latitude," by F. H. Seares, P. J. van Rhijn, Mary C. Joyner and Myrtle L. Richmond. *Contrib. Mt. Wilson Obs.,* No. 301, 1925.

ON MANSON'S EYE WORM IN POULTRY

IN certain sections of Florida, especially the seacoast areas, quite severe outbreaks of Manson's eye worm (*Oxyspirura mansoni*) in poultry occur each year, occurring most frequently during the rainy season of the summer months. Due to its economic importance, and also since its life history was unknown, a detail study of the parasite was begun in November, 1925, by Dr. D. A. Sanders, of the veterinary department, Florida Agricultural Experiment Station.

The first experiments conducted were simply exposure tests to determine if the parasite would pass from infected to non-infected birds kept under continuous exposure. It was impossible to transmit the parasite by simple exposure of non-infected to infected birds.

Experiments were conducted in an effort to produce infection by placing eggs containing embryos of the parasite into the eyes of non-infected birds. It was impossible to produce infection in this manner.

It was also found impossible to produce infection by placing newly-hatched larvae into the eye of non-infected birds.

From the above-mentioned experiments, it was quite apparent that an intermediate host was necessary in the development of the life cycle of Manson's eye worm. Search for the intermediate host was begun, and this search included examinations of many of the insects most commonly found around the premises of the poultry flock. After examining many insects, finally specimens of *Pycnoscelus* (*Leucophaea*) *surinamensis* Linn., a species of cockroach, were examined and encysted larvae of the eye worm were found in the body cavities of some of these roaches. Larvae were taken from the infected roach, and when placed into the eyes of birds, these larvae remained therein and produced infection. Larvae were taken from the body of a roach and placed into the mouth cavity of non-infected birds with the result that