famous physician of all time, a veritable commonplace, to a local celebrity.

W. A. OLDFATHER

URBANA, ILLINOIS
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ANOTHER ADULT "HOWLER"

THAT ancient legend about the figures in Haeckel's "Anthropogeny" seems still to be extruding pseudopodia. Thus in the *Baptist Beacon* (April, 1924, p. 14), from a page-long letter of Professor George McCready Price, one learns that "the fraudulent photographs of imaginary embryos which were published by Ernest Haeckel . . . are still going the rounds of books published in the interest of the evolution propaganda."

Remarkable man, this Haeckel! Not only did he *photograph imaginary* embryos—he did it twenty years before any one else had photographed *real* ones!

E. T. BREWSTER

LABORATORY APPARATUS AND METHODS

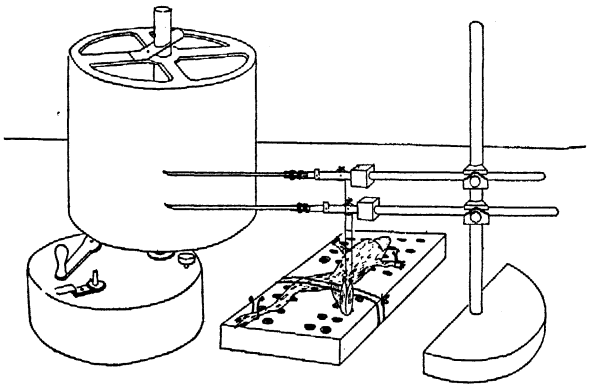
RECIPROCAL INNERVATION IN THE FROG AS A LABORATORY EXPERIMENT

AFTER examining a number of laboratory textbooks in physiology, we noticed that there was no mention made of any experiment which would illustrate the phenomenon of reciprocal reaction of antagonistic muscles. Perhaps this is due to the fact that the authors considered this experiment too difficult for elementary students of physiology, or, perhaps, that suitable apparatus was not on hand for that purpose. The only place where we did find mention made of this experiment was in Porter's textbook.

In our laboratory this has been a routine experiment for several years, and since the students have obtained such good results, with ordinary laboratory apparatus, it has been suggested to us that this fact be called to the attention of other teachers of physiology.

The apparatus we use consists of two muscle levers (Harvard Apparatus type). To the pulleys of these levers are attached the tendons of the gastrochemius and the tibialis anticus by means of pieces of thread. The after-loading screw of the lever to which the tibialis anticus is attached is raised in order to permit the lever to descend when this muscle relaxes. The frog is fastened on the frog board which is placed under these levers. The diagram shows the exact setup of the apparatus.

We are consistently obtaining many good tracings of the antagonistic action of these two muscles, showing that the experiment may be successfully and easily performed with the type of apparatus found in many physiological laboratories.



Good results may be obtained by applying a small amount of dilute acetic acid on the perineum of the frog, by stimulating in the same region with a weak tetanizing current, or with single induction shocks. We have also obtained good results by pinching the toe of the opposite foot, and by stimulating the gastrocnemius directly with single induction shocks and with the tetanizing current.

This experiment is of such fundamental importance that it occurred to us that other teachers of physiology might be interested in introducing it to the students as a standard laboratory experiment. We believe that the student can gain much by actually observing this important fact for himself.

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SCIENTIFIC BOOKS

Dynamic Psychology, An Introduction to Modern Psychological Theory and Practice. By DOM THOMAS VERNER MOORE, Ph.D., M.D. Monk of the Order of St. Benedict, professor of psychology, Catholic University of America, director of the Clinic for Mental and Nervous Diseases, Providence Hospital, Washington, D. C. Lippincott, Philadelphia, Chicago and London, 1924, pp. viii + 444.

APPROACHING the field from the points of view of physician, philosopher and psychologist working in both classroom and clinic, the author defines psychology as "the science of the human personality." His attitude on questions is a resultant of his historical knowledge of philosophy and psychology, his metaphysical dualism and practical knowledge of physiology, applied psychology and psychoanalytic method.

Among the strong points of the book may be listed the following: the treatment of the physiological and

neurological bases of reflex and tropistic action and the classical experiments in this field; summaries of points of view of Freud, Jung, Adler and Meyer, together with the general concepts of psychoanalysis, such as the unconscious, and the technique of psychotherapy; the presentation of cases under his treatment in the hospital at Washington and in the war hospitals of France; the neurological bases for sensations of voluntary movements; brief and consistent historical sketches and commentaries on each topic; presentation of the specific fundamental evidences on "both sides" of moot questions; new concepts of *psychotaxes* or the tendencies of the mind to adjust itself to pleasant and unpleasant situations of a mild sort, and *parataxes,* or borderline cases of abnormal emotional adjustments exaggerated beyond psychotaxes but not yet become psychoneuroses; emphasis on the synthetic counterpart necessary to analysis in mental troubles; the idea of a plan of life as a means of seeing your own way out of mental troubles and for rebuilding abnormal lives; a glossary of technical terms and the up-to-date references to periodical literature.

The author differs from many text-book writers on certain points such as the driving forces of human nature, which he considers to be impulses or abilities, many in number. Affective mental states are independent forms of mental life, not merely attributes of sensations, but arising from them and from intellectual insight. The Lange-James theory is reversed, to state that intellectual insight into a situation is the cause of an emotion, which in turn produces complex bodily resonance, in part specific and in part common to all emotions. His chapters on the freedom of the will and the soul arise from the discussion of voluntary action.

Adversely, it may be said that the book is not usable as a basic text for elementary courses because of the almost total neglect of the cognitive processes; such as, sensation, perception, imagery, imagination and learning, memory and thought processes and most of the special senses and capacities. It does not cover the field of general psychology. Whereas the treatments are dualistic or vitalistic in most cases, the titles are behavioristic and misleading to this extent. The classification of mental capacities is unserviceable.

As a whole the book forms a very readable presentation of the special fields of reflexes, kinesthesis, volitional and abnormal psychology and psychotherapy. The well-written historical and critical sketches which introduce each topic recommend it for use as a special reference in these fields as well as an introduction for the general reader.

ROBERT HOLMES SEASHORE
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Catalogue of the Mycological Library of Howard A. Kelly. Compiled by LOUIS C. C. KRIEGER. Baltimore, privately printed, 1924.

THIS sumptuous volume of 260 large octavo pages is a valuable contribution to the bibliography of American botany. The preface comprising five pages gives the acknowledgment of Dr. Kelly to the botanists and mycologists, past and present, who encouraged or gave aid to his mycological studies begun while he was a resident of Philadelphia. The contents of this finely bound book are arranged alphabetically. Then follows a description of exsiccati, periodicals, floras and miscellanea. The student of fungi and the working mycologist can hardly afford not to have this catalogue in their libraries. It will be indispensable to the botanical libraries of our colleges and universities. The compiler, Mr. Krieger, is an artist and mycologist of note, trained artistically at the Royal Academy of Fine Arts in Munich.

PHILADELPHIA, PA. JOHN W. HARSHBERGER

SPECIAL ARTICLES

COCONUT BUD ROT EXPERIMENTS IN PORTO RICO

COCONUT bud rot has appeared in epidemic form on the western coast of Porto Rico, more than eight hundred cases having been recorded between Mayaguez and Rincon. The earliest observable symptom of the disease is the death of the youngest folded leaf, followed quickly by the death of other young vertical leaves which collapse and fall away, leaving the palm conspicuous by the absence of a central column of young leaves. The older leaves retain their normal color and position for several months, falling away one by one until the trunk is left naked. When a diseased bud is examined a brown decayed spot is usually found near the base of a young petiole. As underlying petioles are examined the decayed area is observed to increase in size and softness. The generative tissue is completely involved in a soft, watery, malodorous rot. There is no recovery.

A fungus was isolated from diseased buds and described as a small chlamydospored strain of *Phytophthora faberi* Maublanc. It grows well on culture media, produces abundant conidia and chlamydospores, and probably does not produce oospores. The conidia and chlamydospores germinate ordinarily by pushing forth several germ tubes, and germination by zoospore formation has not been observed. The conidia are 52.67 by 30.95 microns when measured from 8- to 10-day-old corn meal cultures. The average ratio of length to diameter is 1.69. The chlamydospores have an average diameter of 34.88 microns when grown on potato dextrose agar and corn meal. This figure is considerably smaller than the ones given