SCIENTIFIC BOOKS.

The Mind of Man: A Text-book of Psychology. By Gustav Spiller. London, Swan Sonnenschein & Co.; New York, The Macmillan Co. 1902. Large 8vo. Pp. 552.

Text-books in psychology that may be recommended to the devotees of other sciences, and that offer excellent starting points for the discussion of the living problems about which psychological progress centers, are the exception rather than the rule. When combined with this there is a decided originality of presentation and a freshness of outlook and a happy facility of illustration, the recommendation may be made more emphatic. All of this is true of the work of Mr. Gustav Spiller. Apart from one or two articles in the philosophical periodicals, the author's name is new to the psychological public; but the present volume will certainly make it a familiar one in psychological discussion.

With so many merits—and these not the usual ones—the volume has certain serious defects. The adoption of a strange and unfamiliar, though intelligible, terminology effects a slight gain in precision by the sacrifice of the greater good of the greater number, and really seems unnecessary to the purpose. The treatment of the opinions held by others is cavalierish, to say the least. It seems almost the foregone conclusion of the author that the current or the popular opinion on any topic is the wrong one; whatever is, is wrong. Only occasionally is the extreme form of this tendency manifest; usually it is tempered by a fair statement of the opinion current in the literature. And it should be added at once that the utilization of the literature of the field and the convenient arrangement of the bibliography add to the serviceableness of the whole. None the less the author's bias in favor of the unusual and the neglected leads him more than once to underestimate the force of opposing views and to dwell too exclusively upon the evidence that appeals to his own bent.

The opening blast prepares one for innovation. "I maintain not only that the elementary principles of psychology have still to be established; but I believe that, from the scientific point of view, no serious attempt has yet been made in that direction." Unchallenged tradition, imitative remodeling of current views, a defective sense of reality, have kept alive the opinions that influence psychology. The watchword of the moment is 'Back to observation.' And the observation that is most fertile is that of trained introspection. The introspective method is *the* psychological method and must ever remain so. Those who have questioned either its validity or its efficiency have been unaware of its possibilities in trained minds. It requires a skilful mechanic to use a complicated tool; and the psychologist has been the poor mechanic laying the fault of his own defective insight upon the imperfection of his tool. "There is scarcely a passion so wild, or a dream so subtle, that a trained psychologist cannot collectively turn round and with freedom inspect the related processes." Experimental introspection is the key that will unlock the real problems of psychology.

The paramount doctrine of psychology is that mental processes are determined by needs; that the aspect of mental processes that should stand out boldest in the perspective, and should dominate every detail as well, is the functional one. Association, habit, memory, imagination, attention, all travel along the psychological highways in response to certain organic needs. The study of these needs is the study of psychology. "Psychology treats of the nature and the satisfaction of those distinctive needs which are connected with the central nervous system, and this it treats of in systematic conjunction with the system of sights, sounds, smells, etc., which are developing concurrently; *i. e.*, psychology treats of the needs which arise out of the relations of the various systems in the organism, and out of the relation of that organism to its environment."

Apart from this method of approach—which in many ways represents a view of the topic that others in writing and teaching are emphasizing, though with different motive—it is likely that the book will carry more weight and more interest by reason of the skill with which the several chapters support their

themes. It is the fertility and pertinence of illustration, the masterly marshaling of facts, the discernment that detects the crucial points of difference and is not deceived by the current or surface view of things—these will be the traits that will measure the value of the work to the progress of psychology. Accordingly, the volume may be set down as one of those that has a literary style and a capacity to make the reader think. He will not always think as the writer does; but he will never listlessly muse as his eyes scan the pages, nor idly accept as dogma what is offered to his understanding.

The scope of the volume may be said to include those phases of discussion that deal with thought as a whole; with the succession of waves of consciousness and the composition of these waves. Habit, memory, imagination, dreams, originality, language, reasoning, attention, willing, emotional and esthetic products, are all subjects of chapters with headings the appropriateness of which the reader will recognize only as he proceeds. There is no detailed study of the senses nor of the nervous system; for it is maintained that science has progressed only so far that general illustrations of these alone find a place in the psychology now possible. The results of the experimental or laboratory psychology are regarded as too incomplete and too artificial to modify more than incidentally the more vital considerations that flow from experimental introspection. Genetic sources are considered; though the topic is the mind of man, and thus deals but little with the minds of animals.

The opinion is frequently heard that, in spite of the enormously increased attention that is now given to psychological matters, and in spite of the conviction, only occasionally challenged, that psychological principles have great potency to guide the practical path of culture and education, yet so little that is tangible enough to be summarized and entered to the credit side of the progressive inventory of science can be written upon the pages allotted to psychology. Apart from the pertinent query as to how far such difficulty is itself significant, it may well be concluded that psychology might profit by a shaking up rather than by efforts to harmonize essentially opposed tendencies; that the time has come, not for repairing old clothes, but for making new ones. Those who feel that there is some force in such considerations, as well as many others whose interest in matters psychological is less comprehensive or less professional, will find much food for reflection—and food pleasantly prepared and vigorous withal—in the pages of Mr. Spiller's notable work.

JOSEPH JASTROW.

Archiv für Protistenkunde. Edited by DR. FRITZ SCHAUDINN in Rovigno, Istria. Jena, published by Gustav Fischer. Price, M. 24 per Band.

In the future, as in the past, it is not improbable that works dealing with the unicellular plants will continue to be published in botanical journals, and papers dealing with the bacteria will appear sometimes in one and sometimes in another, or that monographs on the Protozoa will still be brought out in strictly zoological periodicals. This will involve the continuation of an old bibliographical difficulty for those investigators whose problems carry them into the more general aspects of the unicellular organisms. These difficulties may, however, be considerably lessened if students of the several groups mentioned would send their contributions to the *Archiv für Protistenkunde.* This is a journal devoted exclusively to the publication of papers upon the unicellular organisms, and under the direction of one of the most capable students of these forms. It is sincerely to be hoped that the object of the new journal will be fulfilled, and that students of the unicellular plants and animals in America will interest themselves in the project and contribute to its support.

Two numbers of the *Archiv* have already appeared, and the contents of the first give an adequate view of the scope of the periodical. In this there are six contributions which vary in length from two or three pages, as in Prowazek's note on *Trichomonas hominis,* to nearly eighty pages in Lohmann's excellent monograph on the Coccolithophoridæ or coc-