

with mediocrity. A schooling devised primarily to produce good character, or patriotism, or dynastic loyalty, or class sentiment, or religious orthodoxy may lessen friction in society, but it can not bring genius to bloom. For this the prime essentials are *the communicating of known truths and the imparting of method.*

On the whole we have in this work an able marshaling of the knowledge thus far brought to light on the subject of social psychology, and a clear, untechnical, while at the same time often eloquent, discussion of the laws, principles and leading truths of that rather subtle and recondite branch of sociology.

LESTER F. WARD

The Solar System: A Study of Recent Observations. By CHARLES LANE POOR, Professor of Astronomy in Columbia University. New York, G. P. Putnam's Sons.

From the above sub-title we naturally look for something different from the ordinary text-book on astronomy. Nor shall we be disappointed in this respect. The author informs us that the work grew out of a series of lectures, that these were mainly historical and were used to supplement standard text-books and to guide the students in their reading. Though the work includes much which may be found in the ordinary text-book, there is also much not usually to be obtained from such sources. On the other hand, some matters of great interest are hardly touched on in the present work. We mention by way of illustration the minor planets and the subject of eclipses.

The lecture notes seemed to have been followed quite closely. We are informed, for instance, page 235, that the last opposition of Jupiter took place in the latter part of December, 1906, and that the next will fall on the last of January and the first of February, 1908. We also learn that the last favorable eclipse of the sun occurred August 30, 1905, and the next eclipse which can be utilized, will take place October 10, 1912, and will be observable in South America. Precisely what disposition has been made of the eclipse of January 3, 1908, does not appear.

The subject of the solar energy is treated

quite fully, with the different theories as to its maintenance, its constancy and results of measurement of the same. We confess, however, to finding ourselves a little disconcerted on learning, page 126, that such measurements are of no vital importance.

Naturally the reader in search of the latest and most interesting information relating to the solar system will turn to the planet Mars. The author acknowledges to having given to this planet more space than the subject really warrants. We find an entire chapter of twenty-four pages entitled "Has Mars Canals?" The leading authorities—Schiaparelli, Lowell, Newcomb, Barnard and many more are quoted at considerable length, with the result that we are finally told that "very little is actually known in regard to the conditions existing on Mars," that many of the problems are psychological and not physical. The seeker after truth, therefore, finds himself at the end of the chapter precisely where he stood at the beginning.

The author gives us an account of the discovery of the seven satellites of Jupiter, beginning with Galileo and ending with Perrine, but the ink is hardly dry on the page before the discovery of an eighth at Greenwich calls for a revision of the chapter, thus illustrating the impossibility of keeping such a work strictly up to date. In this connection let it be noted that the name of satellite IV. is Callisto, not Calypso.

Each planet from Mercury to Neptune is taken up in turn. Many facts of historical interest are given, among which are some old friends not usually found in the text-books, such as the famous Moon Hoax of 1835.

Chapters on comets, on meteors and on the evolution of the system close a very interesting and suggestive volume.

C. L. DOOLITTLE

FLOWER OBSERVATORY

SCIENTIFIC JOURNALS AND ARTICLES

The Journal of Experimental Zoology, Vol. V., No. 3 (March, 1908), contains the following papers: "The Physiology of the Nervous System of the Razor-shell Clam (*Ensis directus* Con.)," by Gilman A. Drew. The