

source—but it is to be hoped that first-hand news obtained from research workers and inventors will later become available; in this respect the American Service has been singularly successful. It is of happy augury that the French organization is starting with high ideals: it will not try to serve both science and mammon; commercial profit is outside its scope and there will be no traffic with the advertiser; and it will preserve a rigid independence of all parties, groups and factions. Its sole aim is the prompt diffusion of scientific and technical knowledge in a way that will neither “mystify the crowd” nor promote sophistry and error by over-indulgence in “purple patches.”—*Nature*.

SCIENTIFIC BOOKS

The Music of the Spheres, A Nature Lover's Astronomy, by FLORENCE GRONDAL. New York, The Macmillan Company, 1926. xiii + 234 pages.

If we were called upon to apologize for the pursuit of pure science, that is of knowledge for its own sake, the diffusion of such knowledge among the masses would be our chief argument. Accordingly, every successful attempt to get the general reader into the path that leads to an acquaintance with the present state of science should be warmly welcomed. A goodly number of such attempts have been made in recent years, particularly in the biological and physical sciences, but many of them have failed either because the man of science has not known how to write or because the writer has not known his science. Notable successes in this field are for the most part the performances of leaders in science who have taken the trouble to learn how to write. But there are some exceptions to this; a very interesting one is presented by the excellent astronomical books of the late Agnes Clerke, who never did any astronomical work herself, but who had the good sense to make use of the co-operation of expert astronomers.

The book before us begins with the most elementary and (to the beginner) the most fascinating phase of the subject, namely, the story of the constellations and the mythology that forms their basis. Intermingled with these stories and following them is an introduction to the present state of astronomy. The author brings to her task a genuine love of the subject and much enthusiasm, and she has a spritely style that makes her text easy reading; but her knowledge of the science is surprisingly deficient. So many and so serious are her misapprehensions that the book defeats its own purpose; the reader who goes on (as the author obviously hopes and expects him to do) to a second and more advanced work will have in his mind ample material for confusion and discouragement. Of those pages that deal with astronomy, as distinct from

mythology, there is hardly one that a well-informed critic would leave unchanged in its statement of fact or explanation. From a list that might be made painfully long a few may be cited.

The names of Antares and Capella (page 11), together with those of many other stars, are of Greek and Latin origin, not Arabic. On pages 39, 262 and 301 the spectroscope is credited with feats it has not performed; it did not explode the old idea that stars are fixed (the discovery of proper motions did that at least a century earlier); and it has not proved that the polar caps on Mars are snow or that there is no water on the moon. The Nova in Cassiopeia (page 60) was seen in 1572, not six centuries ago. Surely everyone knows that Bessel had at least something to do with the measurement of the first stellar distance (page 100). By no means is 61 Cygni (page 134) the nearest star as seen from the northern hemisphere nor even the nearest star north of the celestial equator. The period of Delta Cephei (page 140), one of the best known variables in the sky, is more than five days, not four and a half hours. Sirius is not our largest star (page 141) but merely the brightest as seen from the solar system. Six first magnitude stars, in addition to those enumerated (page 145) can be seen from certain points in this country; one of these six is Canopus, a conspicuous object throughout a large part of the country. It is ridiculous to say (page 156) that “about 500 red stars have already been observed but these are all at a distance vastly remote”; the number is much greater and some of them are among our nearest neighbors. Similarly (page 64), the number of known Algol variables is not merely thirty; it exceeds 150. Almost every one knows that Bremen is not in Lower Saxony (page 233). October (page 267) was no more named for a Roman festival than were September, November and December. The brighter moons of Saturn measure thousands of miles in diameter, not hundreds (page 276); and several besides Titan can be seen in small telescopes. The discussion of the age of the earth on page 285 is woefully out of date. The capture of a comet by a stellar system can hardly depend upon the morale of the comet (page 241): “A great comet may be material drawn in from outside space, perhaps flying back and forth between two stars until it becomes so exhausted that one of the stars is able to capture it.”

The book is handsomely printed and illustrated; in these respects it does credit to a publishing house whose standards are so well and favorably known. It is a great pity that Mrs. Grondal did not submit her manuscript to a competent astronomer before venturing into print.

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