

Eccentricities between	No. of orbits.
0.0 and 0.1	0
0.1 ,, 0.2	2
0.2 ,, 0.3	4
0.3 ,, 0.4	8
0.4 ,, 0.5	9
0.5 ,, 0.6	9
0.6 ,, 0.7	2
0.7 ,, 0.8	4
0.8 ,, 0.9	2
0.9 ,, 1.0	0
Mean average value of the eccentricity of the forty binaries, 0.482.	

The author thus points out that binaries are distinguished from the planets and satellites in two very distinct respects, namely :

- (1) The orbits are highly eccentric.
- (2) The stars of a system are comparable, and frequently almost equal in mass.

Dr. See gives a series of illustrations of the orbits arranged in the order of their eccentricity, and remarks that while these are more eccentric than those of the planets and satellites, they are much less eccentric than those of the long-period comets.

The reason why these orbits came to be so eccentric the author evidently leaves to a second volume, as he says that hereafter we shall see that the orbits were originally circular.

In Dr. See's concluding remarks, he points out that these double systems stand in direct contrast to the planetary systems, in which the masses of the components are not in the proportion of two to one, or equal, but where the central body has 746 times as much mass as all of the planets combined.

It is true that investigators, as Dr. See remarks, have always approached the problems of cosmogony from the point of view of our solar system, and have not given sufficient attention to systems of the double or triple star type. This is probably owing to the fact that double star astronomy is practically very modern, and that those investigators were not aware that the telescope would reveal such innumerable systems of double and triple stars as we now know to exist in the heavens. It is further natural that we should consider our system in the first instance a common type of the celestial ones, until it is proved on the contrary to be otherwise. Indeed, such a system as ours need not be in any case an exceptional one in space; looking at a similar one in the heavens, we should most probably only be able to see the central body the sun, in consequence of the smallness of the components (the planets) revolving round it.

It seems likely that such a system would be more easily observed when in the nebulous stage, as, for instance, in those spiral nebulae which have central nuclei very large compared with the smaller condensations scattered along the outliers.

In conclusion, we may say that we have nothing but praise for this book. By its publication double-star astronomy is greatly enriched, and every double-star observer and computer will find it a valuable addition to his library.

Not only will the exposition of the modern methods of computation of such systems add greatly to its usefulness, but a mine of valuable information regarding the previous researches on the best-known members of double-star systems is brought together in one volume.

WILLIAM J. S. LOCKYER.

THIERRY WILLIAM PREYER.

TO our readers the announcement of the death of this distinguished physiologist will come with surprise. To those who knew Preyer it might have seemed as if he, with that appearance of overflowing vigour, might have looked forward to a long lease of life. It was other-

wise, for Preyer died at the comparatively early age of fifty-six of Bright's disease.

Preyer was born in Manchester in 1841, and, after studying in London, he, like most German students, attended several universities, including Bonn, Berlin, Vienna, Heidelberg, and Paris. In 1862 he took the degree of Doctor of Philosophy and that of Doctor of Medicine in Bonn in 1865. In Bonn he was brought under the influence of Max Schultze; in Berlin Helmholz, Du Bois, and Virchow inspired him with a desire to become a physiologist, while later he worked under Bernard in Paris.

He commenced his independent scientific career as a "privat docent" in Bonn in 1865, and shortly afterwards, in 1869, he was appointed Professor of Physiology in Jena, where his best work was done.

His energy was unbounded, his enthusiasm unquenchable, and so he set to work and had erected the well-known physiological institution in Jena, where he remained until a few years ago, when he resigned his chair, and went to Berlin, where he remained some time, and then retired to live in Wiesbaden.

Preyer's name will always remain associated with his work on hæmoglobin, a work inspired partly by the researches of the Berlin School. The many-sided view of his genius found its expression in the very diverse subjects in which he worked and wrote.

His well-known work "Die Seele des Kindes" (1882) was a study of the mental development of his own child; it amplified and extended the less extensive observations of Darwin.

In the 'seventies his researches were chiefly acoustical, and to-day there exists in the Jena Institute an extraordinary collection of acoustical apparatus which he used for his researches.

About the same time (1877) he published his researches on the cause of sleep.

His "myophysical law" was not so well received by physiologists. Many of his papers and those of his pupils are published in his "Sammlung Physiologischer Abhandlungen" (1876-80), in which will be found his most interesting observations on hypnotism and an allied subject which he called "Kataplexie." Whatever may be thought of his theory, his observations stand, and only this year Verworn, of Jena, has again taken up the subject, and published some most interesting results of "Kataplexie" in serpents. Perhaps Preyer's attention was directed to hypnotism by the works of Braid, of Manchester, which he translated.

As showing the peculiar character of Preyer, and illustrating his never-ceasing quest after something new, we have his physiology of the embryo, which has been translated into French.

Preyer had a ready pen, he was a charming and attractive lecturer, and some of his popular discourses have had a wide circulation.

One of the most pleasantly written of his works is his "Elements of General Physiology," in which he gives a rapid, bold, and characteristic sketch of the development of this subject. This work was also translated into French.

Preyer was the very personification of buoyancy and good humour, and he had an open, frank expression which won for him friends on every hand. He visited England frequently, and those who heard him discourse at the Edinburgh meeting of the British Association are not likely to forget the intense impression he made on his audience, not only by the extraordinary array of facts with which he dealt, but also by the ease and fluency with which he spoke English. Preyer had many of the gifts of an orator, and when his perfervid temperament was roused he carried his audience with him and brought conviction to their minds by the very ardour and force of discourse.