BOOKS RECEIVED.

SIR WILLIAM HERSCHEL: HIS LIFE AND WORKS. By EDWARD S. HOLDEN, of the United States Naval Observatory, Washington. Charles Scribner's Sons, 743 Broadway, New York. 1881.

There is a charm which attends the memory of some representative men, and which endears even their history to posterity.

Foremost among such men we recall the name of Herschel, and we could hardly select a more pleasing task than to touch lightly on a few salient points in his eventful career.

In our opinion the great feature in Herchel's history was, that he succeeded in reaching eminence as a scientific man, notwithstanding the apparently insurmountable difficulties that stood in his path to success.

Consider for a moment the position of Herschel when he made his first effort to become an Astronomer. He was 34 years of age, residing in a foreign country where he was unknown, and earning a bare existence as a musician, with a younger brother on his hands, and a sister who was not even acquainted with the language of the country (England) in which they then resided.

They were too poor to hire a servant, and what with out-door performances and giving instruction at home, there was little time for recreation, for even leisure moments were occupied by copying music. So that it was only at night, when he would retire wearily to bed, with a basin of milk, and Smith's *Optics* and Ferguson's *Astronomy*, that he could devote the first thoughts to a science which hereafter must ever be associated with his name.

He would then rise in the morning with thoughts intent on seeing for himself the celestial objects of which he had been reading over night.

To purchase an instrument was out of the question, but with the indomitable energy of will which stamped his career thereafter, he at once determined to make a telescope with his own hands, and not content with striving to see what other observers had observed, he began to contrive a telescope eighteen or twenty feet long.

But to earn an existence by music now occupied every moment, day and night and it was many months before a telescope could be commenced; but finally in 1744, when he was 36 years of age, he completed a Gregorian telescope, and began to view the heavens under circumstances that must have been depressing to a less ardent mind; for he had to contrive a few spare moments as best he could, even running home between the acts at the theatre to make a short observation, and then rushing back to take his position in the band.

And so, with mind divided between the oratorios of the *Messiah, Judas Maccabeus,* &c., and the variable star *Mira Ceti,* along with the music went the Astronomy, until on the 13th of March, 1781, Herchel, this amateur astronomical observer of Bath, made one of the most striking discoveries since the invention of the telescope, for in examining the small stars in the neighborhood of H *Geminorum* perceived one which appeared visibly larger than the rest, and this object proved to be the major planet, now calledUranus.

Naturally, this was the turning point of Herschel's life, and his a ter career was a rapid rise to the highest eminence as a scientific man and one of the most accomplished astronomers.

The story of Herchel's life is now presented by Professor Edward S. Holden, in a charming little book which may be read at a single sitting, and yet complete and ample in all the details necessary to convey to the reader a vivid picture of the great Astronomer.

We admire Professor Holden's book for its simplicity of diction; not a superfluous word is given, and most of the more interesting events are given in the very words of his sister as recorded by her.

We desire to see this interesting work in the hands of the youth of this country, for if a noble example of a successful career will stimulate a young man to exalted aspirations for a useful and honorable life, the perusal of the present memoir should have such an inspiring effect.

We acknowledge the receipt of the following important works from the Government of New Zealand, being part of a series prepared by the Colonial Museum and Geological Survey Department, of which James Hector, M. D., C. M. G., F. R. S., is Director in Chief:

A MANUAL OF THE NEW ZEALAND MOLLUSCA.—A systematic and descriptive catalogue of the marine and land shells, and of the soft Mollusks and Polyzoa of New Zealand and the adjacent islands, by Frederick W. Hutton, F. G. S., C. M. Z. C., Professor of Biology, Canterbury College, New Zealand University, Wellington, 1880.

A MANUAL OF THE NEW ZEALAND COLEOPTERA, by Captain Thomas Brown, Wellington, 1880.

This Catalogue occupies 650 pages and contains 1050 species. It is a complete description of all the New Zealand Coleoptera known to Science, classified according to the views of Lacordaire. This valuable work is spoken of as a monument to the zeal and industry of an ardent naturalist.

PALÆONTOLOGY OF NEW ZEALAND.—Part IV.—Corals and Bryozoa of the Neozoic period in New Zealand; by the Rev. J. E. Tenison-woods, F. G. S., F. L. S. Wellington, 1880.

The author has a high reputation for his minute acquaintance with the Marine Invertebrata of the tropical and temperate parts of Australia, and during the last twenty years has published many works on the subject, so that the inferences drawn in this work may be received with much confidence.

MANUAL OF THE INDIGENOUS GRASSES OF NEW ZEALAND, by John Buchanan, F. L. S., Land-Botanist and Draughtsman of the Geological Survey. Wellington, 1880.

The general system of classification employed by the author is that adopted from Sir Joseph Hooker's standard works on the New Zealand Flora, but the methods upon which the general and specific characters have been arranged is from a more recent work on the British Flora by the same distinguished botanist. Sixty full-page illustrations are given of specimens, nature-printed, each having, in addition, from 10 to 25 drawings showing the anatomical character of the inflorescence in each species, from original microscopic dissections made by the author, whose excellent botanical knowledge, combined with his skill as a draughtsman, peculiarly fitted him for the work.

TRANSACTIONS AND PROCEEDINGS OF THE NEW ZEALAND INSTITUTE, 1879.,Vol.VII., edited by James Hector, C. M. G., M. D., F. R. S.; issued May, 1880. Wellington.

In this volume is a valuable series of papers, many of them well illustrated, and we congratulate the colony on the valuable scientific work accomplished and in progress. We find many of the papers in this volume of the highest interest, and we shall shortly present our readers with selections.

Any of our readers residing in New York who desire to examine these works can do so by calling at our office, and it may be convenient to know that the Colonial Government has arranged a scale of moderate charges, at which any of these publications can be purchased.