

iron, who held the first place in the Polytechnic School in 1871, and who has entered the School of Mines.

1871.

1. The Poncelet Prize, in Mechanics, to M. J. Boussinesq.
2. The Lalande Prize in Astronomy to M. Borelly for the Discovery of the Planet Lomia.
3. The Montyon Prize in Statistics to M. E. Cadet, for his work on "Marriage in France." Honourable mention was given to Dr. Ely for his work on "The Army and the Population."
4. The Jecker Prize in Chemistry to M. Schutzenberger for his works on Organic Chemistry.
5. The Barbier Prize in Botany to M. Duquesnel, for his memoir on "Crystallised Aconitine."
6. The Bordin Prize for a paper on "The part played by Stomata in the Functions of Leaves," was not awarded, and is withdrawn from competition; but a bonus was given to M. A. Barthelemy.
7. The Desmazières Prize was not awarded either, but a bonus of 500 francs was given to M. Husnot for various works on the Cryptogamic Flora of Martinique.
8. The Bréant Prize.—A sum of 5,000 francs, the whole annual interest of the legacy, was awarded to M. Chauveau for his experiments upon Virulent Virus and Maladies.
9. The Montyon Prizes in Medicine and Surgery.—Two prizes of 2,500 francs were awarded—(1) To M. Grehant for his Physiological and Medical Researches on the Respiration of Man; (2) To M. Blondlot, for a series of memoirs concerning the disputed questions of Medicine, Chemistry, and Physiology. Three sums of 1,500 francs each were awarded—(1) To M. Bérenger-Féraud for his work entitled "Treatise on the Direct Union of Osseous Fragments in Fractures;" (2) To M. Duclout for his work entitled "Account of three cases of Vesico-vaginal fistula," &c; (3) To M. Leon Colin for his Treatise on Intermittent Fevers. Honourable mention was made of (1) M. Raimbert, (2) M. Bucquory, (3) M. Hajem, (4) MM. Krishaber and Peter.
10. The Godard Prize to Mr. J. Jolly for his work on Cancer of the Prostate; honourable mention being made of M. Puech.
11. The Montyon Prize in Experimental Physiology was divided between M. Chantran for his Observations on the Natural History of Crabs, and M. A. Giis for his Memoir on the Pith of Ligneous Plants. Honourable mention was given to M. Mehay for his Essay on Beet-Root Sugar, and a bonus to MM. Chéron and Gonjon for their Researches on the Functional Properties of the Nerves and Muscles during the intra-uterine life.
12. The Montyon Prize for Works, &c., bearing on unhealthy occupations. Of this, 2,500 francs were awarded to M. Goldenberg for the methods adopted by him for securing the healthiness of his Manufactories. A bonus of 2,000 francs was given to Mdlle. C. Garcin and to M. Adam for their Automatic Sewing Machine; and a similar sum to M. Louvel for his process of preserving grains *in vacuo*.
13. The Tremont Prize was awarded in 1869 to M. Le Roux, who holds it for three years.
14. The Laplace Prize was awarded to M. L. A. E. Sauvage, dux in 1870 of the Polytechnic School, and who has entered the School of Mines.

MRS. SOMERVILLE

MARY SOMERVILLE (born Fairfax), long ago known for her scientific researches and long well known for her popular and educational scientific works, died in the neighbourhood of Naples, where she has lived for some years, on Friday, November 29, aged nearly 92 years, having been born on December 26, 1780. She belonged to a good Scotch family, her father having been the late Vice-Admiral Sir William George Fairfax, was a great reader, learned Euclid surreptitiously while quite a girl, and at the same period got up a knowledge of Latin in order to be able to read Newton's *Principia*, and was educated at a school in Musselburgh, near Edinburgh.

Her first important contribution to science was made in 1826, when she presented to the Royal Society a paper on the magnetising powers of the more refrangible solar

rays, the object of which was to prove that these rays of the solar spectrum have a strong magnetic influence. This paper led to much discussion, which was not set at rest till the researches of Riess and Moser showed that the action upon the magnetic needle was not caused by the violet rays.

Mrs. Somerville's first work of any extent was her "Mechanism of the Heavens" (1831), written at first at the request of Lord Brougham, as one of the series of publications by the Society for the Diffusion of Useful Knowledge. As, however, the work was on too large a scale, and, according to Sir John Herschel, to whom the MS. was submitted, as it was written for posterity, and not for the class whom the society designed to instruct, it was published as an independent work, eliciting from all quarters the highest encomiums, especially as being the work of a woman. It was founded to some extent on La Place's treatise, though the authoress exercised her own judgment in the acceptance or rejection of his theories.

Her next work "On the Connection of the Physical Sciences," was published in 1834, and was referred to by Humboldt as "the generally so exact and admirable treatise."

In 1848 appeared the work by which, perhaps, she is most generally known, her "Physical Geography," which, along with some of her other works, has passed through many editions, been reprinted frequently in America, and translated into several foreign languages. Notwithstanding the numerous works on the same subject that have since appeared, Mrs. Somerville's book still holds place as a first authority, even with the initiated.

In 1869 appeared her last work, "On Molecular and Microscopic Science," which, to quote a writer in the *Edinburgh Review*, "contains a complete conspectus of some of the most recent and most abstruse researches of modern science, and describes admirably not only the discoveries of our day in the field of physics and chemistry, but more especially the revelations of the microscope in the vegetable and animal worlds." The fact that Mrs. Somerville was close on her 90th year when she published this work, in which is contained a *résumé* of the most interesting results of recent scientific investigations, may give one some idea of the undying vigour and clearness of her mind, as well as of her intense love of science.

So long ago as 1835 Government recognised Mrs. Somerville's great merits, by bestowing upon her a literary pension of 300*l.*; and in the same year she was made an honorary member of the Royal Astronomical Society, the only other lady on whom this honour was conferred having been Miss Caroline Herschel. The Geographical Society awarded Mrs. Somerville the Patron or Victoria Medal in 1869, and about thirty years earlier the Fellows of the Royal Society subscribed for her bust, which was executed by Chantrey, and now adorns the Society's library. She certainly deserved all the honours she obtained, for during her long life she has done very much to raise the standard of scientific text-books, and to spread among general readers the accurate results of scientific research.

Dr. William Somerville was his wife's second husband, her first husband having been Captain Greig, a naval officer, fond of mathematics, and who took pleasure in giving his wife instruction in his favourite subject, thus probably giving her mind a bent towards science which has led to important results.

NOTES

ONE of the most cheering Ministerial outcomes that we have read for a long time is to be found in Mr. Gladstone's speech, on Tuesday, at the Society of Biblical Archæology, an outcome which indicates, we take it, on the part of the Government, that the lamentable condition of research in England has at length forced itself upon them, and that the policy which has done such