

SCIENCE IN ITALY<sup>1</sup>

IN reviewing a number of scientific pamphlets, &c., from Italy, we took occasion to remark (NATURE, vol. xiii., p. 110) that "the restoration of political unity and freedom in Italy has also brought about a revival of that intellectual vigour which we are accustomed to associate with the names of Dante and Tasso, of Galileo and Torricelli. When Italy was divided and each state politically oppressed, her best men were in exile, and their best scientific work was expressed in a foreign tongue."

In forwarding to us a copy of the handsome volume, the title of which is given above, the editors have written to us, quoting the foregoing passage with approval, while the introduction to the volume is written in the spirit of those remarks. It is gratifying to learn what progress Italy has made during the last ten or fifteen years in education, literature, science, commerce, and industry. "An air more propitious to study is now breathed by united Italy." New scientific schools, institutions, and societies have sprung up, and the old have been renovated. The best men, returned from exile, have resumed their place among the explorers of nature; and the present state of intellectual activity only renders more evident the condition of misrule and division which so long afflicted that noble country, when all free inquiry, whether in nature or in politics, was forbidden, or at least discouraged. In singular contrast to all this, her best minds have at length found that intellectual repose and encouragement at home which are so essential to the carrying on of grave studies.

As an exponent of this new state of things, the editors conceived the idea of publishing a half-yearly report of the scientific progress of Italy; and taking advantage of that wide spirit of tolerant liberality which pervades all true science, they appealed for support to such of their countrymen as were distinguished in the various departments of physics, chemistry, mineralogy, geology, botany, zoology, physiology, anthropology, and geography. This appeal was most liberally and heartily responded to, and the result is a large octavo volume of about 450 pages, well written and carefully edited, very few mistakes occurring, even in the spelling of well-known names, although we find at p. 15, "Poulliet," at p. 68, "Bences Jones," at p. 84, "Edvard Hull," and this odd mode of division at p. 15, "Hel-mholtz." The contributors to these various departments have performed their respective tasks nobly and well. They have not only contributed voluminous abstracts of papers, notes and memoirs, but in many cases have furnished more or less elaborate reports on the state of their respective branches of science, and have also given, in some cases, reviews of the best books by Italian authors. For example, the reporter on mineralogy, in addition to some sensible remarks on the backward state of science in Italy, devotes thirty full pages to a review of Bambicci's "Corso di Mineralogia" (second edition, 1875), and refers to it again and again in terms of such high praise as would seem scarcely to belong to a compilation from standard writers in other languages. Indeed the superlative terms of laudation which occur in many parts of the volume strike our colder northern temperament as being at least exaggerated. Why refer to the *chiarissimo* *Signor Professore*, So-and-So, while foreign *savans*, whether living or departed, are simply and properly mentioned, as Ampère, Faraday, Helmholtz, &c. When Lord Castlereagh appeared in plain evening dress at a brilliant party at Vienna, amidst a crowd of highly-decorated gentlemen, a lady, asking Metternich who he was, said, "Mais il n'est pas distingué!" that statesman replied, "Ma foi! c'est être bien distingué."

Although we are bound to bestow cordial praise on this volume, yet we should not perform our duty

<sup>1</sup> Half-yearly Review of the Physico-Natural Sciences in Italy. Edited and published by Drs. G. Cavanna and G. Papasogli. Anno I., 1875, vol. I. Florence, 1875. (*Rassegna Semestrale*, &c.)

honestly if we omitted to point out a certain backwardness on the part of some investigators in reading up their subjects before they attempted to make what to them appear to be new researches. For example, at p. 66 is an abstract of a memoir by Pelloggio, entitled "Contribution to the Phenomena of Supersaturation," in which the author appears to have no more recent information of his subject than that derived from Löwel. He points out that salts isomeric with the one in solution act as nuclei to it. This was shown to be the case many years ago by Violette. He also insists that porous bodies, such as sponge, charcoal, &c., are powerful nuclei; whereas it has been shown by Tomlinson that such bodies, boiled with the solution which is then left to cool, are purely passive. So also when MM. Mercadante and Colosi affirm (p. 47) that carbonic acid is not emitted by the roots of plants, they are evidently unacquainted with Broughton's researches. We may also point out what seems to be an inaccurate observation on the part of Pollacci (p. 50), namely, that sulphur moistened and exposed to the air absorbs oxygen and becomes converted into sulphuric acid.

At p. 126 there is an interesting account of the fall of a meteor at Supino in the district of Frosinone on Sept. 14, 1875. It was accompanied by a trail of fire and smoke; and after reaching the earth it took a horizontal direction, passed through a house without striking it, thanks to an open passage, and so disappeared. A number of fragments were found in the passage, the heaviest of which weighed 364.2 grammes. The fragments were warm. At p. 134 is a paper on red chalk, which would deserve attention did our space permit.

Anthropology and ethnology are comparatively new to Italy, but they have begun a life of apparent vigour under the auspices of a new society, a museum, and a journal.

There are some interesting details respecting the skulls of Dante, Petrarch, Ugo Foscolo, and Volta, the last being of extraordinary capacity. In the skull of Petrarch the Etruscan type is said to be evident, namely, a voluminous brain, strongly developed in all its parts, and of superior psychological power; but the posterior predominates over the anterior portion, leading to the conclusion that the sentiments and the instincts prevailed over the intellect, although this is of the highest order.

We look out with much interest for the second part of this volume, which the editors promise shall appear shortly.

C. TOMLINSON

THE VOLCANO OF RÉUNION<sup>1</sup>

THE volcano of the Island of Réunion, surrounded and defended as it were by great circular walls perpendicular for more than 100 metres, forming what is known as the inclosure, is hardly accessible except on two sides, by the high plain of the interior or by the Grand-Brulé; that is, setting out from the coast to climb directly the slopes of the crater itself.

Far from becoming extinct, as has been supposed, this volcano is on the contrary in great activity, and almost every year torrents of lava overflow in that western part of the island known as the great burnt country; its streams sometimes reach the sea, and there form, at a height of more than 2,000 metres, a regular cascade of fire, which may reach a length, as in 1844, of from 900 to 1,000 metres. But these great eruptions are happily very rare; they are only seen at intervals of six or eight years, and very often the lava is arrested 1,000 or 1,500 metres from the mouth of the crater. Towards the end of August, 1874, loud detonations, sudden tremblings of the ground presaged an eruption of great violence; but the flow lasted only two days; directed towards the rampart of the Tremblet, it was happily arrested at 1,500 metres without causing much damage. It was then that I arrived

<sup>1</sup> From an article in *La Nature*, No. 160, by M. Ch. Vélain.