

## A POET'S SCIENCE.

BY MIRIAM ALLEN DEFORD.

**J**ULY 8, 1922, will mark the centenary of Percy Bysshe Shelley's untimely end in the waters of Via Reggio. How many who will celebrate him then as poet and idealist, will remember also his keen interest and life-long delight in the problems of natural science?

Chemistry and astronomy were the only two sciences at all known to Shelley. In 1820, when he wrote that most charming of poetic epistles, the "Letter to Maria Gisborne", he expressed his passing interest in the workshop of her son, Henry Reveley, the engineer, with his

"Forms of unimaginable wood, . . .

Great screws, and cones, and wheels, and grooved blocks"; but Shelley's enthusiasm for Reveley and his steamship, so rudely interrupted by a real or apparent attempt to defraud him, was more humanitarian than scientific. From the days at Eton, however, when the embryo poet set trees on fire with gunpowder and a burning-glass, or "raised the devil"—and his tutor—with electric batteries; even from earlier days, when he brought stained hands and singed clothing to the nursery at Field Place, and tried to "shock" his little sisters into a cure for chilblains; Shelley's great interest lay in chemical and physical experiments, that gave free scope to fancy and were too primitive to call for the exactness alien to the romantic nature of the experimenter.

Eton brought Adam Walker, the self-taught lecturer on natural philosophy, with his orrery and his talks on the planets. Shelley has spoken of the flood of joy and wonder that swept over him when first he realized the existence of a plurality of worlds. He purchased an orrery of his own, and a solar microscope, that, though it was pawned afterwards to relieve an acquaintance's dis-

tress, was recovered, and seems to have been the last scientific instrument that Shelley disposed of in his wandering life.

At Oxford, during his five meteoric months there, Hogg has described Shelley's rooms—a mass of retorts, phials, crucibles, mingled with books and personal belongings “as if the young chemist, in order to analyze the mystery of creation, had endeavored first to reconstruct the primeval chaos.” A spot burned by a chemical in the new carpet was being rapidly enlarged by its owner's frequent tripping as he crossed it. “An electrical machine, an air-pump, the galvanic trough, a solar microscope, and large glass jars and receivers, were conspicuous amidst the mass of matter”. It was a symbol of Shelley's wide and undisciplined researches in science. Natural history was always nearly allied in his mind to witchcraft; it was the romance, the strangeness and the mystery of life that seized upon his eager imagination. One lecture on mineralogy was enough—he could not even endure it to the end; and mathematics and the exact science were closed to such a temperament as his.

But this very romanticization and idealization of nature gave, to Shelley glimpses into the future which are often amazingly accurate. If he dreamed of the philosopher's stone and the elixir of youth, he foresaw also the wonders of irrigation, of aerial navigation, of applied electricity. “It will be possible, perhaps, at no very distant date,” he said, “to produce heat at will and to warm the most ungenial climates—as we now arise the temperature of our apartments to whatever degree we may deem agreeable or salutary. But if this be too much to anticipate, at any rate we may expect to provide ourselves cheaply with a fund of heat that will supersede our costly and inconvenient fuel, and will suffice to warm our habitations for culinary purposes and for the various demands of the mechanical arts.” How Shelley would have greeted the thought of harnessing intra-atomic force!

Again: “What a mighty instrument would electricity be in the hands of him who knew how to wield it? What will not an extraordinary combination of troughs of colossal magnitude, a well-arranged system of hundreds of metallic plates, effect? The balloon has not yet received the perfection of which it is surely capable; the art of navigating the air is in its first and most helpless infancy. It promises prodigious facilities for locomotion, and will enable us to traverse vast tracts with ease and rapidity, and to explore unknown countries without difficulty. Why are we still so ignorant of

the interior of Africa?—why do we not despatch intrepid aeronauts to cross it in every direction, and to survey the whole peninsula in a few weeks?" This same Africa was to be turned from a desert to a garden by properly directed irrigation.

With the swift onslaught of disaster, following those Oxford months, and with the troubles and journeys of his too few years to come, Shelley never afterwards had opportunity for scientific investigation or speculation. Even so early, it was tinged, not only with poetry, but with philosophy and humanitarianism, the two other loves of his life. Chemistry was to open up the study of "things themselves", as opposed to their outward forms; the shadow the balloon that flew over Africa was to be the promise of freedom to its million slaves. For a brief time, in London, he thought of studying medicine as a profession; he even attended Abernethy's lectures on anatomy at St. Bartholomew's Hospital. His eager assistance to Reveley's ill-fated steamboat, his ardent interest in the casting of its giant cylinder, proved that his love of science slept; it was not dead. All his life he visited the homes of the poor who surrounded him,—not only as a friend, but more or less as a physician, tending them in illness with the scraps of learning remembered from the weeks he "walked St. Bartholomew's". But in every such enterprise, though the initial attraction—as in the building of the great dam at Tremadoc—might be purely scientific, before very long Shelley was caught by the philanthropic aspects of the undertaking.

Shelley's science was strictly that of a poet—not reasoned and classified, as Goethe's was, for example, but personal, exalted and speculative. Even so, however, it is a phase of the life and thought of a great writer and a great man that affected much of his most unrelated work, and that should not be left to die forgotten in the archives of biography, a hundred years after he went to find if it be true that "after we die we wander as spirits through the other planets."