

SCIENCE DEPARTMENT.

[A series of notes prepared for the Monthly. by Henry Montgomery, M.A., Coll. Inst., Toronto].

THE first number of a new journal devoted to Chemistry, and published in the city of Baltimore (Innes & Co.), has lately reached us. It contains seventy-six pages of valuable matter, is neatly got up, and presents a very creditable appearance. It is entitled the "American Chemical Journal," and is edited "with the aid of chemists at home and abroad," by Ira Remsen, Professor of Chemistry in the Johns Hopkins University. In the announcement it is stated that this journal is to comprise from sixty-four to eighty pages, and is to be issued only when there is a sufficiency of suitable material, which material is to consist of original papers; articles from other journals; reviews and reports on applied agricultural, physiological, physical, analytical and mineralogical chemistry. That it will rank high in the scientific literature of America is no more than may be expected from the perusal of the specimen number, and from the fact that such distinguished names as Ira Remsen, Ph.D. (Göttingen); H. Newell Martin, D.Sc. (London), A.M. (Camb.); and J. Norman Lockyer, F.R.S., are connected with it.

DR. T. STERRY HUNT believes our atmosphere to be cosmical and not merely terrestrial; that is to say, a portion of a "universal medium diffused throughout all space," but condensed about the centres of attraction. Even the waters of our world form a part of this universal medium. Hence, a change or disturbance in the atmosphere of any one of the globes would cause itself to be felt in the atmosphere of all the remaining ones. In this manner great climatic changes are accounted for. Sir William Grove advanced the same idea

of a cosmical atmosphere in the year 1843, and Mr. Williams also advocated it in his work, "The Fuel of the Sun."

THOSE desirous of preserving minute animalcules in the natural shape will be glad to learn that such may readily be done by means of Osmic Acid. This acid (Os. O⁴), which is a poison, is dissolved in water to the amount of two per cent. A drop of this solution is put upon the infusoria under the covering-glass, but if the vapour of the acid be permitted to reach the organisms they will be instantaneously fixed and preserved. This plan has been made known by M. Cortes, of Paris. In employing the foregoing method for the preservation of the microscopic beings of an organic infusion, too great caution cannot be exercised, as the tetroxide of osmium is volatile and emits irritating and poisonous fumes.

AN American naturalist, Mr. Ernest Morris, has just returned from his fourth trip of exploration to South America, bringing with him, what is reported to be, an immense collection of the flora and fauna of Brazil, comprising seven thousand butterflies, fourteen thousand beetles, numerous moths, and a great number of curious and beautiful plants. One of his specimens is that of a plant indigenous to the regions around about the Rio Negro River, and known to the natives as "cat's-paw-cotton," which he considers capable of conversion into a most useful fabric. He describes the inhabitants of that river, lake and forest country, as poor, filthy in the extreme, exceedingly indolent, and possessed of but little religion or morality. The limited amount of labour done has to be performed by the women.