SCIENCE

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THE NEW YORK ACADEMY OF SCIENCES.

ADDRESS BY THE PRESIDENT, PROFESSOR HENRY F. OSBORN, AT THE FIFTH ANNUAL RECEPTION.

Members of the Academy and of the Scientific Alliance: Welcome to the Fifth Annual Reception!

AN Academy of Science stands as a clearing house for scientific ideas; for the encouragement, diffusion and interchange of methods and principles between all branches. The elasticity of our own Academy is well illustrated in this fifth annual exhibition of the progress of science. Thanks to the energy of our Secretary, Professor Dodge; of the Chairmen of the many different sections and the cooperation of institutions in all parts of the country, it appears to cover a broader field than ever before. Here you can obtain glimpses of the work in many lines progressing at Harvard, the Johns Hopkins, Princeton, the U. S. Coast Survey, Chicago, the Troy Polytechnic, the Allegheny Observatory, besides our own City College, University of New York, Columbia University and, not least, this great Museum.

Methods.—Here, too, the methods and instruments of research, as well as the results of work in the most diverse fields of scientific enterprise, are brought together and stimulate us by their very contrast. Our inventiveness is as notable in the beautifully delicate instruments for studying

the human senses displayed by the psychologists as in the apparatus developed by our astronomers and physicists. Beside the newest technique of pure research in the physical and biological sciences, you will find beautiful and diverse methods applied to the arts, to photography, to the manufacture of exquisite glass vases, as well as to the more useful clays from all parts of Europe.

Explorations.—True to the Monroe Doctrine, we are no longer allowing France, Germany or any other country to preoccupy our proper scientific territory, and you will observe proofs of especial activity along the noble western coast of the Americas from Cape Horn to Point Barrow, Alaska. From the photographs of Arequipa, Peru, the highest astronomical station in the world, the mosses of northern Bolivia, the Indians of Mexico, we have invaded British territory and are making the study of the North Pacific and the zoology of the Pacific Coast from Puget Sound to Alaska our own. We are also invading other countries by expeditions of various kinds, and our geologists and mineralogists draw their exhibitions from every part of the world, from Tasmania to Finland.

Diversity of Subjects.—The subjects treated in this exhibition are as widely separated as these geographical areas; in adjoining alcoves you will find the brains of New Guinea natives and the moth Siamese Twins. Across the aisle, in the field of electricity, signalling without wires is in process, widely in contrast with the concentrated polar cold of the liquid air in the main hall. The monster Camarasaur, at least ten millon years old, from the base of the Cretaceous, puts a Pickwickian interpretation upon the words 'old' and 'rare' as applied to the manuscripts in the department of philology.

Progress.—Scientific work day by day appears to drag. It is only when an interval of a few months passes and we have taken stock of things that we realize our immense progress. We are especially encouraged for the future by the generous gifts which are pouring into the service of science in this city. Only a week ago a gentlemen agreed to fit out an expedition to the west coast of Africa. Fortunate is the country where men of brains are drawn into the pursuit of science, and men of appreciation and wealth supply the sinews of scientific warfare. Pure research is a luxury, for it brings no immediate return, but as an investment it finally repays a city or a country a hundred or a thousand fold.

At our annual exhibition last year we signalized electricity as the especial subject of scientific progress in the person of Mr. Nikola Tesla. This year we believe that astronomy deserves the place of honor. American astronomy, reaping, as it does, the combined advantages of our mathematical genius and natural inventiveness, of our wonderfully clear sky, and the support of generous wealth, certainly occupies a commanding position. We, therefore, take pleasure in introducing Professor George E. Hale, who will tell you of the great Yerkes Observatory and the especial merits of large telescopes.

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*THE FUNCTION OF LARGE TELESCOPES.**

The annual exhibitions of the New York Academy of Sciences afford excellent opportunities for studying the progress of science. The photographs and specimens gathered here to-night are substantial evidence that in no department of research have investigators been idle during the last twelfthmonth. So true is this that to sketch the year's advances in even a single field would consume more time than is allotted to the annual lecture. It therefore seemed to me wise,

* An address given at the Fifth Annual Reception of the New York Academy of Sciences.