Prize Awards of the Paris Academy of Sciences.

AT the annual public meeting of the Paris Academy of Sciences the prizes and grants awarded in 1927 were announced as follows:

Mathematics.—The Francœur Prize to Georges Cerf, for his work on partial differential equations.

Mechanics. — The Montyon Prize to Dimitri Sensaud de Lavaud, for his work on the steering of motor-cars: the Poncelet Prize to Henri Villat, for his works on the mechanics of fluids.

Astronomy.—The Lalande Prize to Vincent Nechville, for his researches on star streams: the Valz Prize to Lucien d'Azambuja, for his work on sun-spots, the solar prominences, and chromosphere: the De Pontécoulant Prize to Emile Paloque, for his work on the analytical theory of the movement of the Trojan planets.

Geography.—The Gay Prize to Henri Humbert, for his work in Madagascar: the Tchihatchef Prize to Jean Delacour and Pierre Jabouille, for their ornithological work in Indo-China.

Navigation.—The prize of six thousand francs between André Courtier (2500 fr.) for his work on hydrographical data and the prediction of tides: Pierre Changeux (2500 fr.) for his general study of the dynamics of ships or apparatus utilised in marine or air navigation: Edouard Davaux, for his "Cours d'electrotechnique": the Plumey Prize (in equal parts) between Etienne Hugé, for his memoir on the pulverisation and combustion of mazout in marine boilers, and Marcel Gautier, for his memoir on the utilisation of the Diesel motor.

Physics.—The Gaston Planté Prize to Gabriel Foëx, for his work on magnetism: the Hébert Prize to Pierre Sève, for his work on alternating currents: the Henri de Parville Prize to Paul Girault, for his work in electrotechnics: the Hughes Prize to Georges Reboul, for his researches on the radiation of badly conducting bodies through which an electric current is passing: the Pierson-Perrin Prize to Fernand Holweck, for his work on X-rays with wave-lengths between 14 A. and 500 A.: the Clément Félix Prize to Alexandre Dauvillier, to assist him in his researches on X-rays of great wave-length with special reference to their biological properties.

Chemistry.—The Montyon Prize (Unhealthy Trades) to Emile Kohn-Abrest (2500 fr.) for his work on poisonous gases, and an honourable mention (1500 fr.) to Edmond Rolants, for his book, "Les eaux usées": the Jecker Prize (in equal parts) between Georges Chavannes and André Kling, for the whole of their work: the Cahours Foundation to Clément Duval, for his work on nitrates: the Houzeau Prize to Augustin Damiens, for his work on the existence of bromine in animals and on the phenomena of allotropy.

Mineralogy and Geology.—The Cuvier Prize to Emile Argand, for his work on structural geology, and especially his researches on the Pennine Alps: the Delesse Prize to Charles Jacob, for the whole of his geological work: the Victor Raulin Prize to Fernand Daguin, to assist in the publication of his memoir on the geology of northern Morocco: the Joseph Labbé Prize to André Demay, for his geological work on Pechelbronn petroleum, Carthagena, and Huelva.

Botany.—The Desmazières Prize to V. Likhité, for his book on researches on the development and biology of some Ascomycetes: the Montagne Prize to Adrien Davy de Virville, for his work in experimental morphology relating to the mosses: the de Coincy Prize to Pierre Bugnon, for his botanical work: the Rufz de Lavison Prize to Lucien Plantefol, for his biological study of the moss *Hypnum triquetrum*.

Anatomy and Zoology.—The Da Gama Machado Prize to Henri Neuville, for his work on the skin of the elephant and mammoth: the Savigny Prize to Maurice Langeron, for his pathological researches in Africa, Crete, and the Eastern Mediterranean.

Medicine and Surgery.—Montyon Prizes to Raoul Bensaude (2500 fr.), for his work entitled, "Traité d'endoscopie, rectoscopie, sigmoidoscopie": to Henri Carré (2500 fr.), for his "Recherches expérimentales sur une ectodermose neurotrope du chien: la maladie des chiens": to Constantin Levaditi (2500 fr.), for his work entitled "L'herpes et le zona, ectodermoses neurotropes." Honourable mentions (1500 fr.) to Jean Barotte and Achille Urbain, for their memoir "Étude des teignes du cheval et de l'immunité dans les teignes expérimentales": to Jean Verge, for his experimental researches on a diptheroid-variolic affection of birds, and to Christian Zœller, for his researches on diphtheria. A citation to Émile Frache, for his work, "Les fouets et le mouvement des bactéries," and to Gustave Lesbouyries, for his work on the tuberculosis of the domestic carnivora.

The Barbier Prize to André Léri, for his work on affections of the bones and articulations: the Bréant Prize to Charles Dopter and Paulin Vezeaux de Lavergne, for their work on epidemiology: the Godard Prize to René Herpin, for his biological researches on the reproduction and development of some polychætal annelids: the Chaussier Prize to Edmond and Etienne Sergent, for their twenty-five years' work on the study and prophylaxy of paludism in Algiers: the Mège Prize to Félix Ramond, for his book on the diseases of the stomach and duodenum: the Bellion Prize to Jean Rieux, for his work on latent pulmonary tuberculosis; Grégoire Ichok receives an honourable mention: the Larrey Prize to Jean Jacquemart and Charles Clavelin, for their memoir, the military health service in times of peace and of war: the Argut Prize to André Charles Guillaume, for his work on light radiations in physiology and therapeutics.

Physiology.—The Montyon Prize to Louis Merklen, for his memoir on the rhythm of the heart during muscular activity, especially when due to games: the Pourat Prize to Antoine Magnan, for his work on the mode of flight of birds with application to the construction of aeroplanes: the Philipeaux Prize to Mlle. Eudoxie Bachrach, for the whole of her work in experimental physiology, with an honourable mention to Marc Jacot for his memoir on glycogen, adrenalin, and insulin.

Statistics.—The Montyon Prize to Jean Gérard, for his book on ten years of industrial effort.

History and Philosophy of Science.—The Binoux Prize to Henri Daudin.

Works on Science.—The Henri de Parville Prize to Fernand Monpillard (2000 fr.), for his book, "Macrophotographie et microphotographie," and Mme. Valentine Allorge-Gatin (1000 fr.) for the "Dictionnaire de botanique," by (the late) Ch. L. Gatin.

Medals.—The Berthelot medal to Emile Kohn-Abrest, Clément Duval, and Augustin Damiens.

General Prizes.—The Grand Prize for Physical Sciences to Georges Bohn, for his work in biology and comparative physiology: the Alhumbert Prize to Henri Longchambon, for his researches on triboluminescence: the Lallemand Prize to André Lwoff, for his work on the pigments in Copepods: the Maujean Prize to Raymond Sabouraud, for his work on the cure of ringworm: the Petit d'Ormoy Prize (Mathematical Sciences) to Ernest Vessiot, for the whole of his work: the Petit d'Ormoy Prize (Natural Sciences)

to Lucien Cuénot, for his zoological work: the Le Conte Prize to Alexandre Yersin, for the whole of his work: the Parkin Prize to M. and Mme. Jacques Tréfouel, for their work on certain carbon compounds and their therapeutic action: the Saintour Prize to Stanislas Zaremba, for his work in mathematical analysis: the Lonchampt Prize (in equal parts) between André Liot, for his memoir on the culture of the pyocyanic bacillus in chemically defined media, and Michel Machebœuf, for his researches on the rôle of nickel and cobalt in animals and on the phosphorus compounds of the blood: the Wilde Prize to Jacques Duclaux, for the whole of his work: the Gustave Roux Prize to Jacques Fromaget, for his geological work in Annam: the Thorlet Prize to Adolphe Richard.

Special Foundations.—The Lannelongue Foundation between Mmes. Cusco and Rück: the Hélène Helbronner Prize to Mme. Schrader.

Prizes of the Grandes Écoles.—The Laplace Prize to Marcel Alliot: the L. E. Rivot Prize between Marcel Alliot, André Ligouzat, Raymond Cheradame, and Charles Feyrabend.

Funds for Scientific Research.—The Trémont Foundation to Marcel Jobelot, for his apparatus for the automatic inflation of captive balloons: the Gegner Prize to Francisque Dumont, for his work in geometry: the Hirn Foundation to René Fabre, for his work relating to fluorescence and its applications in analysis and in biology: the Henri Becquerel Foundation to Louis de Broglie, for his work in wave mechanics, atomic structure of matter and radiation: the Charles Bouchard Fund to Gustave Rappin, for his work on cancer and tuberculosis: the Pierre Lafitte Prize to Henri Abraham, for the whole of his work in radio telegraphy: the Roy-Vancouloux Foundation to A. Borrel, for his work on cancer.

Anti-Malarial Measures in Europe.

THE second general report of the Malaria Commission of the League of Nations, recently published, deals with "Principles and Methods of Anti-malarial measures in Europe." The report is divided into three sections. No. 1 gives a summary of the Commission's views on measures for dealing with malaria in Europe; No. 2 is entitled "Arrangements for studying Malaria"; and No. 3, "Prevention and Control of Malaria."

Section 1 is divided into sixteen parts, each followed by a short 'conclusion' of some half-dozen lines or usually less. These conclusions represent the 'average opinion' of the Commission based upon observation and consultation in many European countries. (A map of the study tours is provided.) They have an unexpectedness about them, very soothing to those who have been constantly told but have not entirely believed, that malaria could be, had been, or was being eradicated in all kinds of places and under all kinds of varying conditions from China to Peru, by this or that or the other panacea. Here is the first shock! "When the discovery of the mosquito cycle of the parasite was made, it was almost universally believed that a single simple method had been put within our grasp, capable of application in all malarious districts. Since then nearly three decades have passed, and such a method is still to seek." But the following is still more disturbing. "The history of special 'anti-malarial campaigns' is chiefly a record of exaggerated expectations followed sooner or later by disappointment and abandonment of the work."

Whether we agree completely with these estimates or not, there can scarcely be any doubt in the minds of those who have pondered over the matter, "that the only prospect of real progress lies in the renewed activity in the continuous study of the disease in all its aspects." We well remember the time when it was considered hyper-scientific to urge that anti-mosquito measures should be confined to killing those mosquitoes known to transmit malaria. It was considered to be more 'practical' to destroy all mosquitoes in one great holocaust.

How refreshing the idea that it is not always necessary to deal with malaria by a method arising directly out of the knowledge that the disease is transmitted by mosquitoes, and how sane the advise that "the treatment of malaria-infected persons is one of the most important measures even from the point of view of prevention."

The subject of 'Bonification' is discussed at length. The Italians do not regard large bonifications as an anti-mosquito measure, and they know that such a bonification may increase the abundance of Anopheles in the area reclaimed; but bonification means a better standard of life, and when that is attained, malaria tends, more or less quickly, to lose its importance as a cause of sickness or death. It would take too long to argue here that bonification has been the cause of the disappearance of malaria from England. Bonification, education, is perhaps the fundamental factor in anti-malarial measures. The anti-malarial factor in general schemes of bonification is the change in the conditions of life of the inhabitants. It has been said that "Le remède du paludisme est dans la marmite." It certainly lies in the schools. We welcome this report as a sane corrective to the exaggerated claims that are often made for this or that anti-malarial measure. The third portion of the report discusses various anti-malarial and anti-mosquito measures, such as the use of quinine and larvicides such as Paris green and liquid paraffin.

This second report is as stimulating as the first report issued in 1926. A summary of it by Lieut.-Col. S. P. James will be found in the *British Medical Journal* for Aug. 27, 1927.

Stereoscopic Photographs of Crystal-Structure Models.

A VERY handy little folding stereoscope has been placed on the market by Messrs. Adam Hilger, Ltd., under the name of a 'camerascope,' together with a series of double (stereoscopic) photographs of crystal-structure models, prepared under the direction of Sir William and Prof. W. L. Bragg, to illustrate the more striking and fundamental results of the X-ray analysis of crystals. Both the instrument, when its three hinged parts are folded together (the two outer ones upon the middle basal part), and the forty-one cards on each of which a complementary stereoscopic pair of photographs is printed, fit neatly into a cardboard box so small (5 in. × 4 in. × 1½ in.) as to go conveniently into the coat pocket. As regards the instrument itself, the front plate of the three thin metallic (blackened) parts, which is arranged upright at right angles to the basal part when unfolded, carries the two stereoscopic lenses, and has a hole of suitable shape and size cut out of it to admit the nose; while the corresponding back-plate, also upright when opened out, is the stage and is fitted with suitable grooves and retaining guides for the reception of any one of the picture-cards, which are 4½ in. × 3¼ in. in size.