the establishment of special institutions having no other object than the search after new truth. Their administration would be difficult. The right men can be found for the work, but can the right electors be found? Ardent searchers after a more intimate knowledge of nature do still live, will ever live; but what of First Commissioners of Works like—but I need not name him? What of Lords of the Treasury who refused the request of a great physicist for 150*l.* for the investigation of the tides? Yet these gentlemen assist in governing a maritime state of some importance. Such electors as these are not within my view, and, if they were, how of the detailed management? Men given up to research are not to be tied by the common rules of official life; to be compelled to report in annual blue books the exact measure of work they have done; to show how many drachms of oil of vitriol they have used, and account for every ounce of platinum.

Special institutions will be founded, but they will owe their origin to private individuals like Sir Josiah Mason; who, having taken into their confidence the chiefs of the world of science in making the appointments, will speak to the masters of research in this wise:—

"I have built a house for you replete with every requirement for your work; I have provided you with such assistants as you have asked for; I have given you an income placing within your reach every reasonable comfort. Occupy your lives in the study of nature. If you succeed in your efforts to attain to new truth, the world will be the gainer. If you fail, your efforts will be enough reward for me."

Such language as this will be surely one day heard. In this fortunate town it is already heard. During the past year a member of this Society, Mr. Fulford, has taken a house, and, having admirably fitted it up, has handed it over to our two distinguished associates, Dr. Gore and Dr. Norris, in order that they may enjoy at least the requisite structural conveniences for the prosecution of research. This building is called the "Institute of Scientific Research."

I must, however, remind you that this noble enterprise must be supplemented by some such efforts in the way of endowment as those now made by this Society; and that those who work even in the highest sphere are bound by the same necessities as bind other men.

SCIENTIFIC SERIALS

Annalen der Physik und Chemie, No. 12 (December, first No.).—On the density and tension of saturated vapour, by A. Wüllner and O. Grotrian.—On the application of the electrodynamic potential to determination of the ponderomotive and electromotive forces, by R. Clausius.—On friction in free liquid surfaces, by A. Oberbeck.—Simple methods and instruments for resistance-measurements, especially in electrolytes, by F. Kohlrausch.—Influence of temperature on the phenomena of charge of a liquid cell acting as condenser, by H. Herwig.—On the modes of electric discharge in gases, by O. Lehmann.—On the electric discharge in liquid insulators, by W. Holtz.—On electric figures on the surface of liquids, by the same.—On the increase of danger from lightning and its probable causes, by the same.—On a microprismatic method for distinction of solid substances, by O. Maschke.—Note on Herr Weber's reply, by A. Winkelmann.

Reale Istituto Lombardo di Scienze e Lettere. Rendiconti. Vol. xii., fasc. xix.—The Leprosy of Upper Italy, especially of Comacchio (continued), by Prof. Sangalli.—Influence of traction and vibration of a metallic wire on its electric conductivity, by Dr. de Marchi.—On a case of twisted neck; a contribution to the doctrine of transport of spinal influence and to establishment of a hypothesis for its explanation, by Prof. de Giovanni.

Zeitschrift für wissenschaftliche Zoologie, November, 1880, contains: Dr. H. von Ihering, on the affinities and kinship of the Cephalopods.—Dr. J. Bellonci, on the origin of the optic nerve and on the minute structure of the "tectum opticum" in the Teleostei (Plates 1 and 2).—Dr. D. Sochaczewer, on the organ of smell in the terrestrial pulmonates (Plate 3).—Dr. Fritz Müller, on the case-making Trichoptera larvæ of the Province of Santa Catharina (Plates 4 and 5), translated by his brother, Dr. Hermann Müller, from the memoirs in Portuguese in the Archivos de Museu National, Rio de Janeiro.—Dr. William Marshall, researches in the sponge groups, Dysideidæ and Phoriospongiæ (Plates 6 to 8).—Prof. Dr. Krause, on two very early human embryos (Plate 9).—Dr. H. Simroth, on the nervous system in the foot of *Paludina vivipara*, with a woodcut of the nerves as dissected out.

Revue internationale des Sciences biologiques, December 1880 contains:—A. de la Calle, on the formation of language (continued).—M. Decatte, microcephalism, from the point of view of atavism.—M. Zaborowski, historical sketch of the relative knowledge possessed by the ancients and in mediæval times of the large monkeys.—Notices of learned societies.—French Association for the Advancement of Science (the Rheims Meeting).—The Academy of Sciences, Paris.

Schriften der physikalisch-ökonomischen Gesellschaft zu Königsberg (1877, ii.; 1878, i. and ii.).—These parts contain the following papers:—On Baron von Richthofen's loess theory and the alleged steppe character of Europe at the close of the Glacial period, by Dr. A. Jentzsch.—Observations of the station for measuring the temperature of the soil in various depths, at the Königsberg Botanical Gardens, by Prof. E. Dorn.—On the prehistoric-archæological work done by the Society, by Otto Tischler.—On the commercial routes of the ancients to the amber country, by Dr. Krosta.—On the physics of the soil, by Dr. von Liebenberg.—On the discoveries in prehistoric tombs at Fürstenwalde, by Otto Tischler.—On hair-covered human beings and the abnormal growth of hair, by Prof. Hildebrandt.—On the marine fauna near the Prussian coast, by Prof. Zaddach.—On the alleged steppe character of Central Europe, by Dr. Jentzsch.—On the state of civilisation in Denmark during the first centuries after Christ, by O. Tischler.—On Darwin's theory, by Herr Czwalina.—On East Prussian burial-grounds, by O. Tischler.—On the fauna of Madagascar, by Prof. Zaddach.—On the intra-Mercurial planet, by Dr. Franz.—On the geological maps at the Paris Exhibition, by Dr. Jentzsch.—On some special geological maps of Germany, by the same.—On the principles of the kinetic theory of gases, by Dr. Saalschütz.

SOCIETIES AND ACADEMIES

LONDON

Chemical Society, January 20.—Prof. H. E. Roscoe, president, in the chair.—The president announced that the Faraday lecture would be delivered by Prof. Helmholtz in the Royal Institution, On the Modern Development of Faraday's Conception of Electricity. The following papers were read:—On pentathionic acid, by Mr. V. Lewes. The author has succeeded in obtaining beautifully crystallised barium and potassium pentathionates by partially neutralising Wackenroder's solution and evaporation *in vacuo*.—A preliminary note on some hydrocarbons from rosin spirit, by Dr. Armstrong. Cymene, toluene, and metaxylene were found to be present. The hydrocarbons insoluble in sulphuric acid are probably hexhydrides of hydrocarbons of the benzene series. The author does not consider that rosin is directly derived from terpene.—On the determination of the relative weight of single molecules, by Dr. Vogel of San Francisco.—On the synthetical production of ammonia by the combination of hydrogen and nitrogen in presence of heated spongy platinum, by G. S. Johnson. About 0·0144 grm. of ammonia were obtained in two and a half hours.—On the oxidation of organic matter in water, by A. Downes.—Analyses of Queensland soils, by Prof. A. Liversidge. These analyses are interesting, as the soils include samples from districts which were exempt from the disease prevalent in the sugar plantations around.—On the volumes of some compounds of the benzene naphthalene, anthracene, and phenanthrene series, by Dr. Ramsay.—On the atomic volume of nitrogen, by Dr. Ramsay.—On a new theory of the conversion of bar iron into steel by the cementation process, by Dr. Marsden. The author thinks that carbon diffuses in an impalpable powder through the heated iron.—On the action of sulphydrate of potassium on chloral hydrate, by W. W. J. Nicol. Thioglyoxylic and thioformic acids are formed.

Zoological Society, January 18.—Prof. W. H. Flower, LL.D., F.R.S., president, in the chair.—The Secretary read a report on the additions that had been made to the Society's Menagerie during the month of December, 1880, amongst which special attention was called to a young female Red Wolf (*Canis jubatus*) from the Argentine Republic, presented by Mr. W. Petty of Monte Video, being the second example of this scarce animal received, and to a Pig from Brooker Island, Louisiade Archipelago, presented by Lieut. de Hoghton, of H.M.S.