

By some accident in binding, the two plates of part 10 (pls. 13 and 15) are repeated from the first volume.

The nomenclature is that of the American Ornithologists' Union, except that the authority given is for the combination, not for the species—an unfortunate departure, inasmuch as it does not tell who was the original describer of the species.

To those unfamiliar with the first volume it may be said that the work is not a scientific treatise at all, but a popular book devoted to the life histories of birds, and based mainly on the authors' extensive field experiences, supplemented by quotations—perhaps too lengthy and frequent—from the writings of well-known ornithologists. It does not profess to cover all North American birds, omitting the water birds, birds of prey and a few others, but treats primarily, as its title indicates, of 'Our Native Birds of Song and Beauty.' It is a large, well printed quarto, and of its kind is incomparably the best book yet published in America.

C. H. M.

Municipal Government in Great Britain: By ALBERT SHAW. New York, The Century Co. 1895, 8°, viii + 385.

The modern increase of cities, and of the proportion of urban population as compared with that of rural districts, is, according to Mr. Shaw, to be accepted as a permanent fact for this generation and its immediate successors, and, instead of lamenting over it, it is the duty of thinking men to devise ways and means to do away with or diminish the evils which are at present connected with city life. The author states his point of view as being that a city government should so order the general affairs and interests of the community as to conduce positively to the welfare of its people, or, at all events, to make it certain that for the average family the life of the town shall not be necessarily detrimental. The object of

the book is to show how some of the older and larger British cities have dealt with this problem, giving details as to their modern forms of government, method of elections and modes of securing pure water, cleanliness, rapid transit, prevention of contagious diseases, etc.

The cities selected for this purpose are Glasgow, Manchester, Birmingham and London, and for each a vast amount of information is clearly and concisely given.

Taking Birmingham as an example, it is shown that in twenty years the death rate of the city was lowered twenty per cent., and, in some parts of the city, sixty per cent.; that the provisions for the comfort and recreation of the people have been greatly increased, and that, while over forty millions of dollars have been expended in securing these improvements, the taxes have not been increased, because the municipal gas and water works, street railways, markets, etc., have been from the financial, as well as from the utilitarian, point of view completely successful. Surely it is worth while for the citizens of American cities to inquire how this has been accomplished.

The description of the means used by the city of Glasgow for the isolation and treatment of infectious disease is worthy of careful study. The Contagious Diseases Hospital has been given the semblance of a lovely village, and Mr. Shaw truly says that "the difference between popularity and unpopularity in a public hospital for infectious diseases may well mean all the difference between a terrible epidemic and its easy prevention." The sanitary wash houses of Glasgow are a feature of the work of the Health Department which finds no parallel in American cities but which is of great importance. One of these cost \$50,000, another \$75,000, and they far more than repay their cost.

The author promises a second volume

treating of municipal government in the chief countries of Continental Europe, and if we could be assured of a third volume, prepared with equal care and accuracy, 'On Municipal Governments in the United States, or how not to do it,' it would be, as Artemus expressed it, 'a sweet boon.' Meantime, let Mr. Shaw's first volume be made a subject of special study by the younger professional men in this country, for the time is near at hand when they will be compelled to take some definite line of action with regard to our own cities, each of which presents its own peculiar problems, but problems upon which much light is thrown by the experiences of our transatlantic brothers.

J. S. B.

Theoretical Chemistry. By PROFESSOR W. NERNST, Ph. D., University of Göttingen, translated by PROFESSOR C. S. PALMER, Ph. D., University of Colorado. Macmillan & Co. Pp. 697. Price \$5.00.

It has long been evident that the treatment of the physical side of chemistry, in text-books avowedly devoted to chemical theory, is not satisfactory. In the present work *Physical Chemistry* is the main object in hand, and, correspondingly, chemical theory proper is relegated to a subordinate position. The treatment of purely chemical topics is clear and suggestive, but brief, and occasionally inadequate. Thus the discussion of the stereochemistry of nitrogen is confined to the mere statement of the views of Hantzsch and Werner, with not even the barest mention of the difficulties and exceptions which have led many to regard the spatial conception, so far as it applies to nitrogen, as prematurely developed.

But insufficiency of this kind is to be expected whenever the attempt is made to cover the whole field of chemical and physico-chemical theory within the limits of the same work, and it would be unfair to criticise Professor Nernst's book adversely

on the ground of inadequate treatment of purely chemical topics which, presumably, were introduced simply for the sake of completeness. We pass, therefore, to the main subject.

For some time a work has been needed which would give concisely the remarkable results of the new *Physical Chemistry*, and this want Professor Nernst's work is well fitted to meet. The material is well selected, the sections are well proportioned, the facts are accurately and concisely stated, and the translation has been faithfully made, too faithfully perhaps, by one who is evidently well fitted, on the scientific side, for the task.

It may not be out of place to express the opinion that the almost complete abandonment of the historical method which characterizes Professor Nernst's work is a mistake, even in so small a volume. This is particularly plain in the account of the doctrine of electrolytic dissociation. One who reads the fascinating chapter 'Geschichte der Electrochemie' in Ostwald's 'Lehrbuch der Allgemeinen Chemie,' Vol. I., part II., observes this concept vaguely adumbrated in the minds of Grotthus and Daniell, sees it implicitly present in the remarkable views of Clausius, and finally recognizes it freed from all obscurity in the papers of Arrhenius. In Nernst, on the contrary, one is introduced to the doctrine fully formed, and, looking about him in some bewilderment to ascertain its source, discovers an incomplete justification for its existence in the behavior of aqueous salt solutions.

The student who desires to devote himself specially to *Physical Chemistry* may read the book with profit, but he would do better, having acquired the necessary physical, mathematical and chemical preparation, to go directly to Ostwald's 'Lehrbuch'; to those who wish simply to obtain a broad view of the present state of the science the work will be decidedly acceptable, and this will be its chief function.