more complete, but unfortunately the typographical errors are rather annoying. The Hymenoptera occupy 170 pages of Volume III, the larger part of which treats of the gallflies and sawflies. The Diptera occupy the remainder of Volume III., and are treated at more length than the preceding orders. The fleas occupy the position of a family at the end of the order. Several Trypetidæ, especially *Dacus oleæ*, *Ceratitis hispanica* and *Rhagoletis cerasi* are treated in much detail. The Hessian fly, which appears under the unfamiliar generic name of *Mayetiola*, occupies fourteen pages.

In the fourth volume the Neuroptera are passed over rather hastily. The Pseudoneuroptera are included under the Orthoptera. The Hemiptera receive the fullest treatment of all. Over 180 pages are occupied with the Aphidæ, and 200 with the Coccidæ. *Phylloxera* covers 75 pages. Nearly all the Coccidæ are figured. Under the name of *Aonidiella perniciosus*, a long account is given of the San Jose scale. In the Orthoptera considerable space is devoted to the remedies for grasshoppers; spraying machines and catching machines, drawn by two men, seem to be especially favored. The volume concludes with a brief notice of the Thysanura under the ordinal name of Pseudoinsecta.

NATHAN BANKS.

An Introduction to Modern Scientific Chemistry, in the form of popular Lectures suited for University Extension students and general readers. By Professor LASSAR-COHN, Ph.D., University of Königsberg. Translated from the Second Edition by M. M. PATTISON MUIR, M.A., Cambridge. New York, D. Van Nostrand Company. Pp. viii + 348. Price, $2.00.

The author's preface says: "In this introduction to *Modern Scientific Chemistry* an attempt is made to give a succinct and accurate presentation of chemistry on strictly scientific lines, and at the same time in as popular a form as is compatible with the vast range of the subject. The book can be followed easily by any one who takes a serious interest in natural science, and will not, I hope, be unwelcome to the younger chemists who are still pursuing their studies. A teacher of chemistry who may not have paid special attention to the methods of presenting his subject will perhaps find in the book something useful to himself and helpful to his hearers."

A careful examination of the text impresses one with the idea that the author has made a particularly happy use of the word modern in his title; and that the promises of the preface have been abundantly fulfilled. The author has been eminently successful in solving the difficult problem of giving the theories and facts of chemistry in a form not only popular but exact. The keynote of the book is its emphasis of the fundamental conceptions of the science.

The style is clear, convincing and always interesting. While the book is intended primarily for University Extension students and general readers, to the student and younger teachers of chemistry it offers a wealth of valuable, accurate information, especially concerning the chemical principles involved in the manufactures of illuminating gas, smokeless powders and other explosives, fertilizers, matches, glass, aluminium, etc.

The reader who does not find this book helpful and inspiring must be very well informed in scientific chemical subjects.

The translation is excellent, and will serve to introduce Professor Lassar-Cohn's work to a new world of readers.

The crudeness of the illustrations (by the author) is the only unsatisfactory feature of a book of rare merit.

WILLIAM B. SCHOBER.
LEHIGH UNIVERSITY.

An Elementary Treatise on Qualitative Chemical Analysis. By J. F. SELLERS, Professor of Chemistry, Mercer University, Georgia. Boston, Ginn & Company. 1900. Pp. ix + 160.

The author has attempted in this treatise to place qualitative analysis upon a scientific basis, to do for this subject what Ostwald has done for analytical chemistry in general. It is very evident from the nature and arrangement of that part of the book devoted to the theory of solutions that it is a reflection of Ostwald's 'Foundations of Analytical Chemistry.' As such it is to be commended. The book, how-