

suggestions for the equipment of the laboratory, and the use of the microscope, with, at the end of the volume, reference lists of dealers and materials, complete the volume, and increase its usefulness for secondary teachers and students, to whom it is on the whole by no means ill adapted. FRANCIS E. LLOYD.

*The Cyclopedia of American Horticulture.*

By L. H. BAILEY and WILHELM MILLER. Comprising suggestions for cultivation of horticultural plants, descriptions of the species of fruits, vegetables, flowers and ornamental plants sold in the United States and Canada, together with geographical and biographical sketches. Vol. IV., R-Z. New York, The Macmillan Company. 1902. Pp. xxx+1487-2016; pl. 31-50; ff. 2060-2800.

Professor Bailey is to be congratulated on the completion of a work that will long stand as one of the monuments of horticultural progress, useful alike to the gardener, the student of cultivated plants and the seeker after general information relating to such plants.

The task he set himself was a hard one, for unless arbitrarily limited the field is a large one, the details intergrading and of unequal importance, and almost every step is beset with nomenclatorial and other pitfalls, between which a safe course is all but impossible because so many of the difficulties admit of only subjective solution which, when opinions differ, cannot please every one. With the good judgment but positive action for which he is noted, he has handled elaborate questions conservatively and as consistently as could be expected, considering that the several articles have been written by many persons whose opinions could hardly be reduced to a uniform level on any matter of policy.

The more notable parts of the concluding volume are the editor's preface, including a history of the planning and execution of the work and an outline for proposed supplements, and the articles on railroad-gardening, *Rhododendron*, *Ribes*, *Rosa* and rose, *Rubus*, *Salvia*, *Saxifraga*, *Scilla*, *Sedum*, seedage, *Selaginella*, *Sempervivum*, shrubbery, *Sorbus*,

*Spiræa*, spraying, storage, strawberry, *Syringa*, tomato, transplanting, trees, *Tulipa*, *Ulmus*, *Vaccinium*, vegetable gardening, *Verbena*, *Viburnum*, village improvement, vines, *Viola* and violet, *Vitis*, walnut, wild garden, winter protection, and *Zea*. W. T.

*The Science of Penology: The Defence of Society against Crime.* By HENRY M. BOIES.

New York and London; G. P. Putnam's Sons. 1901. Pp. 459.

The author of this book approaches his subject from the practical rather than from the scientific side, as is indicated at the outset by the fact that he is a member of the Board of Public Charities and of the Committee of Lunacy of the State of Pennsylvania. He makes no pretentious claims to originality; he wishes simply to 'collate and systematize' what others have done with a view to awaken a wider interest in the rational treatment of criminals and to assist those who make and execute the laws against crime. The really interesting and significant point about the book is that in a work which thus 'aims at practice' and is written by a practical man, the standpoint of those who during the last quarter of a century have sought—amid the ridicule of practical men—to put criminology on a scientific basis, is definitely accepted, and accepted almost as a matter of course. It is sufficient to mention the headings of the three sections into which the book is divided: Diagnostics, Therapeutics and Hygienics. In other words, from a book to which is attached the old-fashioned label of 'penology,' the subject of punishment is simply omitted altogether. At one point, it is true, the author would appear to admit the idea of punishment in so far as it may be of therapeutic value, but on the whole he has nothing whatever to say to it. "Criminal codes as they exist are," he states, "in the light of twentieth century intelligence, a conglomeration of penalties of various degrees of atrocity, irrationality, absurdity and inutility. They are the relics of blind social struggles against social evils, useful chiefly as antiquities, to be collected with thumb-screws, iron boots, racks, and torture wheels in mu-