having a lot of corn is told what proportion of alfalfa, or roots, ought to be fed along with corn to attain the best economic results. This part of Mr. Coburn's book is valuable.

In the earlier chapters Mr. Coburn deals with the various races and breeds of swine in the States, and also with the principles of breeding; but, as may be inferred from the following quotation, although he writes at some length, he does not get much beyond the current nebulous ideas held by stock-breeders on these subjects:—

"There exists in some sections of Old Mexico a type of 'hog' which is the product of crossing a ram and a sow, and the term 'Cuino' has been applied to this rather violent combination. The ram used as a sire to produce the Cuino is kept with the hogs from the time he is weaned. . . . The Cuino reproduces itself and is often crossed a second and third time with a ram."

A number of the illustrations are not accurate representations of the breeds they refer to, but are rather artist's ideals.

OUR BOOK SHELF.

A Text-book of General Pathology for the Use of Students and Practitioners. By Prof. J. M. Beattie and W. E. Carnegie Dickson. Pp. xvi+475. (London: Rebman, Limited, 1908.) Price 17*s.* 6*d.* net.

IN the preface the authors state that this volume is based on the teaching of the Edinburgh school of pathology, where the first chair of pathology in the United Kingdom was founded, and as such we welcome its appearance. At the same time, we do not note any features particularly novel, either in the subject-matter or in its arrangement, and in some respects the book seems to be lacking as a text-book of general pathology. Thus the important factor of heredity in disease, and shock and collapse, are not even mentioned, and we do not understand why a discussion of the nature of gout and the chemistry of uric-acid metabolism "do not come within the scope of the present volume."

The opening chapter deals all too briefly with the cell in health and disease. An excellent summary of modern views on cell-structure and cell-division is presented to the reader, but the section on the chemistry of the cell is mainly occupied with the recommendations of the Chemical and Physiological Societies on protein nomenclature.

The chapters which follow deal respectively with general retrogressive processes, disturbances of the circulation, inflammation and repair, progressive tissue changes, animal parasites, and immunity.

An excellent account is given of fatty change, and modern views respecting it are succinctly stated. Lardaceous disease is similarly well treated, but we do not understand why authors will persist in employing the terms "waxy" and "amyloid" to designate it, for "lardaceous" has the claim of priority; it is official in the "Nomenclature of Diseases" of the Royal College of Physicians, and the material present is universally known as lardacein.

The chapter on inflammation and repair gives all essential details on this important subject. The classification of tumours, admittedly a difficult subject, adopted by the authors is that advocated by Adami. This seems to us unnecessarily complex for the medical student and practitioner. The structure of tumours is given at some length, and the chief views on the causation of tumours are summarised. As regards the latter, one or two points brought out by recent research have been omitted. For example, the occurrence of heterotype mitosis in malignant growths is referred to, but Bashford and Murray's criticism of Farmer, Moore, and Walker's work in this connection does not appear, and in discussing the supposed sarcomatous metamorphosis of carcinoma no mention is made of the fact, which now seems certain, that it is the connective tissue stroma of the carcinoma which is thus transformed, and ultimately overgrows the carcinomatous elements. The vegetable parasites are omitted, as these are dealt with in text-books of bacteriology, but an excellent and fairly full account is given of the animal parasites, protozoan and metazoan. Immunity is discussed in twenty-five pages, and the essentials of the subject are conveyed to the reader.

On the whole, the book may be regarded as a very useful text-book of general pathology. It is excellently got up, and a word of praise must be bestowed on the illustrations, 162 in number (also four coloured plates), the majority of which are the work of Mr. Richard Muir, and as a rule depict very clearly the subjects they represent, though it may be questioned whether so many are really necessary, as they tend to distract the student from an examination of the actual specimens themselves.

(1) *Der Bau des Weltalls.* By Prof. Dr. J. Scheiner. Dritte, verbesserte Auflage. Pp. 132. (Leipzig: B. G. Teubner, 1909.)

(2) *Die Planeten.* By Dr. Bruno Peter. Pp. 131. (Same publishers, 1909.) Price 1.25 marks each.

(1) THE series "Aus Natur und Geisteswelt" is well known. It consists of a number of little treatises, in which men of science occupying prominent positions have attempted to explain in an accurate and comprehensive manner the results of past inquiries, and the position to which our knowledge has extended in various directions. In the former of the two specimens before us, Dr. Scheiner gives the substance of six popular lectures delivered in Berlin to a number of high-school teachers in the course of which he attempted to describe so much of the universe as comes within the range of our telescopes. He endeavoured to bring home to his audience the magnificent scheme of distances on which the planetary and stellar systems are planned; he traced the detection of proper motion of the fixed stars, and showed how the sun's movement in direction and amount can be determined. The phenomena of the sun are explained in some detail, preparatory to the examination of the spectra of stars, a subject which is discussed somewhat fully, as might be expected from a member of the staff of the Potsdam Observatory. Herein, as the author points out, he is on the sure ground of observation. But in his last chapter he approaches the more speculative subject of the origin and constitution of the universe. The subject is handled with skill, and, notwithstanding the limited space to which the author is restricted, he has succeeded in making his subject both clear and interesting. We do not wonder that the little work has passed through three editions, for apart from that longing to satisfy an intelligent curiosity which appeals to so many, the material is put in a very attractive form, which should appeal to many readers.

(2) Dr. Peter has a simpler subject, in which the facts have been many times detailed, and he has little scope for either originality of treatment or lucidity of arrangement. As the planets extend in order from the sun, so he must follow them from Mercury to Neptune A Vulcan is hinted at within Mercury's orbit, but the