

NaCl, 7.62 MgCl₂ (bischofite), 0.08 carnallite, and 0.38 kieserite.

| | Rock salt | Kieserite | Kainite | Carnallite | Bischofite |
|---------|-----------|--------------------------|------------|--------------------------|------------|
| (1) ... | 95.4 | ... | ... | ... | ... |
| (2) ... | 4.42 | 1.05 | 2.02 | ... | ... |
| (3) ... | 0.03 | 0.35 | ... | 0.1 | ... |
| (4) ... | 0.15 | 0.38 | ... | 0.08 | 7.62 |
| | 100.00 | 1.78 | 2.02 | 0.18 | 7.62 |
| | NaCl | 3.8 MgSO ₄ | 2.2 KCl | 7.8 MgCl ₂ | |

Within the limits of a notice of this kind it is impossible to give an adequate account of so important a work. It is hoped, however, that the above extract will show that it has an interest for others as well as for chemists.
J. Y. B.

EVOLUTION FOR BEGINNERS.

An Outline of the Theory of Organic Evolution; with a Description of some of the Phenomena which it Explains. By Dr. Maynard M. Metcalf, Professor of Biology in the Woman's College of Baltimore. Pp. xxii+204. (New York: The Macmillan Company; London: Macmillan and Co., Ltd., 1904.) Price 10s. 6d. net.

THIS is one of the best popular accounts of the theory of evolution that have come under our notice. The author makes little or no claim to originality, but he has on the whole succeeded in his aim of providing a clear and intelligible statement of evolutionary doctrine in most of its recent developments. Technicalities have been largely avoided; but, as the author truly says, "the subject is somewhat intricate, and cannot be presented in so simple a manner as to require no thought on the reader's part." With regard to controverted points, the position taken is generally sound; Dr. Metcalf has no difficulty in recognising the supreme importance of natural selection, or in rating at their true value the speculations of the Lamarckian school, whether new or old. He rightly lays stress on the great fact of adaptation as affording the most conclusive evidence of the controlling power of selection; "adaptation," as he remarks, "is the key-note of organic nature." To some readers his faith in the beneficial character of certain modifications will seem a trifle too robust; but for the most part he treats this branch of the subject with sound judgment and the force born of reasoned conviction.

An excellent feature of the book is its wealth of pictorial illustration. Many of the figures are already well known, but it is of great advantage to the ordinary reader to have them grouped together in such a way as to throw fresh light on each other, and thus materially to assist his comprehension of the subject. Many of the reproductions of original photographs are particularly good; to "find the woodcock" in plate l. makes an interesting puzzle. The representation of the snow grouse in plate lvii., and of the sargassum fish in plate lxxv. are also admirable, while the copies in colour of Tegetmeier's figures of fancy poultry, though a little rough in execution, are amply sufficient for their purpose.

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A few points call for criticism. The author is occasionally betrayed into a slipshod or unmeaning expression, as when he speaks of the sun "moving along its appointed daily course under the control of gravitation." A sentence on p. 31 is entirely misleading, unless the word "artificial" be substituted for "natural." The factors to which special attention has been directed by Osborn, Baldwin and Lloyd Morgan, though not ignored, are rather inadequately treated; the author, moreover, falls into some confusion between individual and specific plasticity. On p. 134 Fritz Müller's interpretation of "synoposematic" resemblances is erroneously attributed to Bates. Indeed, the whole subject of common warning colours, which is one of the most interesting and complicated in the entire range of evolution, deserves more extended and more accurate treatment than it receives at Dr. Metcalf's hands. On plate lxxvi. *Papilio merope (caeneae)* is somewhat uncritically assumed to be edible, and on plate lxxvii. we meet with the astonishing statement that the male of *Perrhybris (Mylothris) pyrreha* is edible, and "imitates the inedible Heliconidæ," while the female of the same species "is not a mimic"; the fact being that it is one of the best mimics known, probably of the Müllerian kind. The lettering of many of the plates stands in need of revision.
F. A. D.

OUR BOOK SHELF.

Précis de Chimie physiologique. By Prof. Allyre Chassevant. Pp. iv + 424; illustrated. (Paris: Félix Alcan, 1905.) Price 10 francs.

THIS is a very excellent text-book of physiological chemistry, and it presents the subject in an attractive way. It treats first of the chemical substances found in the body, then of the various liquids and tissues of the organism, and finally of function.

The work contains all the essential facts of this branch of science, without going exhaustively into details; references are given throughout to the names of investigators, but not, as a rule, to their writings. The subjects treated most fully are the urine, the milk, and diet, for the work aims at being not only academic, but also of practical use to the clinical investigator.

The author is well known for his original work in chemical physiology, and he will be personally known also to many in London, as he was one of those who joined in the recent visit of French medical men to London. He possesses what is rarely absent in French writers, a power of clear and lucid exposition. He is fully conversant with recent progress in science, as evidenced by the way he deals with questions in which physical chemistry is involved.

The line between physiology and pathology is never a well defined one, and thus we find in the book subjects like immunity, serum diagnosis, and serum therapy to the fore. It is inevitable that this should be so, for a proper understanding of ferments and anti-ferments, the prime factors in animal chemistry, cannot be attained except through the knowledge and new ideas which were in the first instance the outcome of study in pathological fields.

M. Chassevant is to be congratulated on his interesting work. He has furnished the student, the investigator, and the teacher with what will be useful to all of them.
W. D. H.