

which have not previously been figured are selected for illustration.

The total number of species catalogued in this volume is 907, and the number of eggs 8474; the latter are, however, very unevenly distributed among the various species, of many of which there is but a single egg in the collection. This is the case, for instance, with three out of the four species of "frog-mouths" catalogued, and likewise with many of the kingfishers, cuckoos, and humming-birds.

The collection is especially rich in eggs of the common cuckoo, associated in a large number of cases with the clutches laid by their involuntary foster-parents. After remarking on their variability in size, the authors state that the cuckoo's eggs likewise present a considerable range of diversity in colour and the character of the marking, although the great majority approach in these respects to the eggs of the meadow-pipit and skylark. Eggs of this type constitute the great bulk of the series in the collection. Some, however, like those associated with the eggs of *Ruticilla phoenicurus*, are blue, while one closely resembles that of a chaffinch. Curiously enough, cuckoos' eggs from hedge-sparrows' nests are of the ordinary type, and show no tendency to become blue. Altogether, the collection includes cuckoos' eggs taken from no less than forty-one different species of birds, ranging in size from a shrike to a fire-crest.

Did space permit, many other interesting points connected with oölogy might be mentioned; as it is, we must bring our remarks to a close with the expression of our opinion of the great interest of this unique work.

R. L.

MODERN SCIENCE POPULARISED.

New Conceptions in Science. By Carl Snyder. Pp. xii + 362. (London and New York: Harper and Brothers, 1903.) Price 7s. 6d. net.

IN the absence of any preface, it is necessary for the reader to form his own opinions as to the aim or object of the book considered as a whole. This, evidently, is to arouse an interest in scientific work among unscientific people by telling the story of the discoveries of the day in unscientific language. We have here portraits of the man that weighed the crown of King Hiero, of the man that broke the atom into ions, of the man that caught and fought the deadly microbe, and other pioneers of science introduced in terms somewhat suggestive of those we have used above. Several of the illustrations show the discoverers at work in their own laboratories, and remind us that this book hails from the same land which in recent years has flooded our breakfast tables with portraits of literary men writing articles by the side of revolving bookcases.

We have spoken of the book as being written in unscientific language, but it would be better to describe the language as unconventional, unorthodox, and very funny to an English mind. As instances, we may quote "chips of atoms" as applied to corpuscles; Marconi is described as having "since the Salisbury Plain trials with kites, taken to the water wholly,"

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and, later on, it is said of him, "Then the tireless experimenter looked out over waste seas, saw in fancy the foggy banks of Newfoundland and said confidently 'That's the next.'" Again, "The Hertz-waves have had a sort of Messianic history. They had been foretold." "This scale" (speaking of Centigrade) "is in universal use throughout the world save in two backward countries called England and the United States." (The author forgets that there are certain enlightened countries which still use Réaumur's scale.) "If like this mechanical eye our eyes were sensitive to these electrical waves, then we might watch the progress of a play in Buenos Ayres or have witnessed the struggles at Peking." "Those who were reared to the ideas of Clerk Maxwell, regarding electricity as a wave and wobble in the highly hypothetical ether, have not failed to implant upon the new theory their collective feet." Light and other waves are stated to "clip through space at 184,000 miles per second." "If, as Prof. Dolbear picturesquely remarks, we could some way get a 'kick' on the ether, space navigation would be easy. It does not seem impossible that we shall be able to do this within another hundred or two hundred years."

The book is not confined to physical science alone. It contains a chapter on Prof. Loeb's discovery of artificial parthenogenesis, another on the nature of life, in which is suggested the possibility of reversing the life processes and growing backward, and a chapter headed "The Spirit Rappers, the Telepaths and the Galvanometer." Seriously speaking, the most important chapter is undoubtedly that dealing with "America's Inferior Position in the Scientific World." In it, among other points, the author urges the necessity of founding an institution like our Royal Institution in America, and directs the attention of his fellow countrymen to their general backwardness in research. We over here are apt to think of the American man of science as being pretty well off in view of the large number of universities existing in the United States, and the large number of chairs attached to each of them, which should result in the individual professors having far more time for research work than they have in this country. If, however, the author succeeds in impressing on his fellow countrymen the need of devoting further endowments for the furtherance of research work pure and simple, the book will not have been written in vain. The danger is that the important part played in science by long formulæ involving dx 's and dy 's, inverted deltas and signs of integration will be overlooked. G. H. B.

APPLIED PSYCHOLOGY.

Outlines of Psychology: an Elementary Treatise with some Practical Applications. By Josiah Royce, Ph.D., LL.D., Professor of the History of Philosophy in Harvard University. Pp. xxvii + 392. (New York: the Macmillan Company; London: Macmillan and Co., Ltd., 1903.) Price 4s. 6d. net.

THE number of persons who are anxious to study psychology in order to make themselves more efficient as teachers is already large, and is happily