amount with different species, including in many instances very full biographies. The references are restricted to the citation of the place of original description of the species, of DeKay's work, and the second edition of the A. O. U. Check-List. As the later supplements to the Check-List are not cited, in cases where the nomenclature of the second edition has since been changed, the names adopted would seem to be not those of the Check-List but of the author's own selection. After the names a glossary is added, giving the derivation and accent of the technical names, a feature too rarely found in works of this character. The eccentric use, or non-use, of capital initials in the English bird names and in many geographical names is doubtless not the preference of the author.

A notable feature of the work is the illustrations, which comprise 42 colored plates, illustrating 132 species, from drawings by Louis Agassiz Fuertes, and a large number of half-tones in the text. Fuertes is here seen at his best. The grouping in some of the plates is excellent; in others too many figures are crowded upon a single plate, an exigency for which he is doubtless not to be held responsible. Again, the backgrounds in some cases detract from the general artistic effect, and might often have been omitted as a needless and inharmonious element of the picture. The color printing obviously does injustice to the drawings, the dull reds presenting a monotonous sameness not warranted by the tints given the birds by nature. Yet with these drawbacks the plates are effective aids in recognizing the species depicted. The poses and attitudes are in most cases admirable and the structural details scientifically correct. For the artist is not only an exceptionally gifted draughtsman, but an ornithologist as well, and a trained and keen observer.

The text illustrations are numerous and appropriate, varying from details of structure to full-length figures, some of them from nature, as in the case of young birds, nests and haunts, and others from some of Audubon's plates or from mounted birds, usually New York state specimens of rare species, as in the case of the scaled petrel, white swan, man-'f-war-bird, white-faced glossy ibis and others.

The work is well-printed, from large, clear type, with few typographical errors[1] (on p. 22 and in the index for Linnett read Sennett!), but is ponderous to handle, the half-tones in the text necessitating the use of heavily coated paper, thus insuring rapid deterioration for a book worthy of long life. From the point of view of good book-making the work is sadly defective, there being, for example, no list of the plates or of the text illustrations, and no clue to what species or how many are figured without looking through the text and the plates. The eighty-odd sheets of inserts are bound in so deep that the middle columns are difficult to get at to read, and are neither paged nor consecutively numbered, but are arranged in "sections" numbered 1 to 4 with 15 to 20 "parts" in each, with the legend half concealed by the method of binding. The regular pagination of the text runs to page 390, with then a gap to page 474, on which the index begins, the gap being filled by the plates, each with an explanatory, unpaged leaf, evidently counted as two pages.

From the letter of Director John M. Clarke to Commissioner Andrew S. Draper (see p. 3), the purpose of the present work is "to bring together the increments to knowledge [of New York birds] during the long period which has elapsed [since 1844] without active interest therein on the part of the State." To say that it faithfully fulfills this purpose is but just credit to both author and artist.

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Mineralogie de la France et de ses Colonies. Tome Troisième, 2e partie. A. LACROIX. Librarie Polytechnique, Ch. Béranger, Editeur, Rue des Saints-Pères, 15, Paris. 1909. No less welcome than the appearance of the

[1] There is a curious slip on p. 76, in citing a paper by George N. Lawrence, published in 1866, under a wrong title and ascribing its publication to a society that did not come into existence till 1878!

second part of the third volume of Lacroix's well-known "Mineralogie de la France," is the announcement that the fourth and last volume is now in press. This monumental description of French minerals, the first part of which appeared in 1893, will therefore soon be complete. The present part, printed eight years after the first part of volume 3, deals largely with the carbonates, of which calcite naturally takes the largest share. Starting in with the description of the French occurrences of brucite and hydrocuprite, the nitrates are taken up (10 pages), to be followed by the carbonates. These make up the bulk of the part before us, and the volume is concluded with an appendix to the carbonates (whewellite and mellite), an appendix of twelve pages and the index to volume 3. The description of calcite extends over about 170 pages and is illustrated by 267 crystal drawings and photographs. Then follow descriptions, replete with crystal drawings, of the other rhombohedral carbonates; giobertite (magnesite), mesitite and pistomesite, siderite, dialogite (rhodocrosite), smithsonite, dolomite and ankerite. The descriptions of these rhombohedral carbonates cover nearly 250 pages, or over half the book. Of the orthorhombic carbonates the description of aragonite is very full and richly illustrated. Then follows witherite, strontianite and cerussite. A detailed description of ctypéite is given and it is evident that Lacroix still holds ctypéite as a third modification of $CaCO_3$, distinct from calcite and aragonite, basing his determination on the optical properties. Hydrozincite, aurichalcite, malachite, dawsonite and bismuthite follow. The description of chessylite (azurite) is naturally very full, there being 56 illustrations of chessylite from the classic locality at Chessy. Descriptions of phosgenite, thermonatrite, natron, trona, nesquéhonite and hydromagnesite close the volume. In the appendix may specially be noted the descriptions of barytocalcite, bernonite of Adam (Tableau minér., 1869) identified as a variety of evansite, calcite (additional description), cristobalite and leesbergite (optically homogeneous). A page of errata to the first part of volume 3 is given.

WALDEMAR T. SCHALLER

Yorkshire Type Ammonites. Edited by S. S. BUCKMAN. Pt. I., pp. i–xii, *i–ii,* plates i–xi, and descriptions 1–8. London, William Wesley & Son. 1909. Price 3s. 3d. each part.

The Jurassic ammonites of Yorkshire to the number of about 150 species were long ago described by Young and Bird and by Martin Simpson in a number of publications issued from 1822 to 1855, with a second edition of one of Simpson's works as late as 1884. Young and Bird's descriptions were inadequate and only a part of them were accompanied by poor figures. Simpson's species were published without illustrations. Fortunately nearly all of the type specimens have been preserved and Mr. Buckman is doing paleontology a real service in the present work by publishing faithful reproductions of excellent photographs (by J. W. Tutcher) of the types. The original descriptions are reprinted and are supplemented by descriptive notes and comments by the editor, who also assigns the species to the numerous genera and families that are now recognized and contributes discussions of the genera represented.

The work will be issued in about sixteen parts, each of which will contain about twelve to sixteen plates. The published first part gives figures of eleven species belonging to the genera *Amaltheus, Uptonia, Platypleuroceras, Harpoceras, Agassiceras, Oxynoticeras, Harpoceratoides* and *Pseudolioceras.* It is evident that the work when completed will be indispensable to paleontologists who have to deal with Jurassic and especially Liassic ammonites.

T. W. STANTON

SPECIAL ARTICLES

ON THE INCREASED PERMEABILITY OF SEA URCHIN EGGS FOLLOWING FERTILIZATION

IN SCIENCE for July 22, 1910, McClendon has shown that the permeability of the egg to ions is greater after fertilization. He used an electrolytic method. We wish to set forth observations made during this summer, which indicate that the increased permeability is not confined to ions alone, and that it is more or less specific for various substances.