

Hart, to electro-coagulation and to the author's negative results with Beard's methods of treating cancer with injections of pancreatic ferments, as well as to the author's method of starvation ligature of blood vessels and lymphatic block in advanced cancer of pelvic organs. The wide experience of the author in this field, his insistence on applying the results of theoretical research in clinical surgery, give especial value to this, the larger part of the book. This work ought therefore to have a wide circulation especially among physicians. Here it can do much good. To the scientist who will keep in mind some of the limitations of this book, it will give a conception of the great variety of problems and methods in cancer research. LEO LOEB

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The Age of the Ocala Limestone. By CHARLES WYTHE COOKE. U. S. Geol. Surv., Prof. Paper 95-1, 1915. Pp. 107-117.

In the first half of the last century it was assumed by American geologists of the Atlantic seaboard that certain extensive calcareous formations in the Carolinas represented terranes intermediate between the Cretaceous and lowest Tertiaries of Europe, or, perhaps were "newest Cretaceous." This assumption seems to have been made on account of the prevalence of light-colored, calcareous matter, chalk, in the upper Cretaceous of the Old World; the lithological resemblance of certain Cretaceous beds in New Jersey to calcareous beds of the south; the supposed identity of certain molluscan species from both areas; and the admixture of fossils from different horizons (really brought about mechanically, or from careless collecting). Lyell took a keen interest in this strange formation in America, and with his skill in observation "on the spot," was able to place these "white limestones" in the Eocene, to the satisfaction of all.

Again in our Eocene stratigraphy we see how a few accurate observations in the field have upset our notions regarding sequence of formations; this time, however, it is the "Ocala limestone" so-called (yet strangely

enough largely equal to Lyell's "white limestone"), that has been the misplaced member. Here, too lithological resemblance, preconceived notions in faunal resemblances and unhappy identifications have been at the base of the trouble. Mr. Cooke's observations on the fauna of the beds beneath the St. Stephen's limestone in Alabama, has led to the identification of the same with the Ocala beds of Florida. The preliminary paleontological proof he brings to bear in favor of his contention seems very satisfactory. The Ocala limestone, therefore, is upper Eocene (Jacksonian) and below the Marianna limestone, and not upper Oligocene and above the Marianna as heretofore held. The importance of this revelation on the geological mapping of Florida is patent to all. We take great pleasure in seeing the distinctness of *Pecten poulsoni* and *P. perplanus* biologically and stratigraphically emphasized. The "Ocala limestone fauna" as modified by Cooke (p. 111) has a most decidedly Jacksonian aspect. The "*Mitra* like *millingtoni*" is quite probably that species for I have found it above the Claiborne "sand" at Claiborne, Alabama, thus well on towards Florida from Jackson, Miss. *Scaphander grandis* is a most remarkably characteristic Jacksonian form. Judging by trans-Mississippian faunas, we should expect soon to find in the Ocala such dominant forms as the Fulguroid *Levifusus branneri*, varieties of *Mazzalina inaurata*; and we already have traces of the high-spined "*Amauropsis*" in Dall's *A. ocalana*. Incidentally, with the Jackson age of the Wilmington beds established, it will be interesting to watch the final disposition of the following references:

Paludina (cast), Wilmington, Jr. Geol. Soc. Lond., Vol. 1, 1845, p. 431, text fig. c.

Viviparia lyelli Con., Am. Jr. Conch., Vol. 1, 1865, p. 32.

Polynices (Amauropsis) ocalana, Dall, Tr. Wagner, Ins. Sci., Vol. III., 1892, p. 377.

Amauropsis Jacksonensis Harris, Proc. Phila. Acad. Nat. Sci., 1896, p. 474, pl. XIX., fig. 3.

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