habitats, and the modification of their organs by adaptation to environment, fill the concluding chapter of this remarkable little volume. Directions are given for hunting cave animals and observing their habits. Authorities are conscientiously and carefully quoted, with fewer mistakes than might have been anticipated in a work of this comprehensive nature, and with evident intention to give due credit to investigators on both sides of the Atlantic.* In conclusion, we accept M. Martel's handbook as an admirable and timely contribution to current scientific literature.

HORACE C. HOVEY.

The Criminal: His Personnel and Environment. A Scientific Study. BY AUGUST DRÄHMS, with an introduction by C. LOMBROSO. New York, The Macmillan Co. 1900. 8vo. Pp. 402.

In a brief introduction to this book Professor Lombroso congratulates the author on his 'lucid exposition' and 'profound and original thought,' stating, further, that he has seldom met with so clear an exposition of his own This testimonial is not altogether calviews. culated to carry weight, for even those who acknowledge a discriminating admiration for Lombroso's genius are well aware that a sound critical faculty is not one of the elements of that genius. It is possible that even the author himself may have been surprised at the excess of this appreciation; for Mr. Drähms is by no means so much in sympathy with Lombroso, as Lombroso is with Mr. Drähms. In his preface the latter states that "the strictly anthropological features here brought out have been accepted mainly as the properly accredited data of trained writers, the latchets of whose shoes I am not worthy to unloose, but whose conclusions nevertheless are taken under a

* On page 114 M. Martel inadvertently attributes to another my discovery of the prehistoric quarries of jasper and alabaster in Wyandot Cave, Indiana. My exploration was originally made in 1855, and my account of the quarries was published in the *Am. Jour.* of Science and Art, in 1878; whereas the account quoted from the *Proceedings* of the American Phil. Society did not appear till 1895. general demurrer; in which respect, however, I have the consolation of knowing that I am in excellent company." Any one who carefully studies this statement will know how far this book is likely to prove useful to him; in its vague phraseology and its non-committal deference to people of all views, it is characteristic of the author's attitude throughout. He attempts to cover the whole field of criminal anthropology and criminal sociology. But not only do the original facts he has brought forward scarcely occupy a couple of pages; his acquaintance with the facts brought forward by others is nearly all second-hand, derived from sources already easily accessible in English, nor is any reference made to even the more important investigations of recent years, such as Winkler's attempt to deal with the data of criminal anthropology on a mathematical basis, or Steinmetz's studies of the evolution of punishment. He loosely discusses views to which he never gives precision by definite citation of authorities, and when he mentions authorities he is unable in a large proportion of cases even to spell their names. It is not impossible for a prison chaplain to do good work in this field, as Mr. W. D. Morrison has shown in England. But Mr. Drähms reveals no signs of that clear vision and intellectual grip which enable a man to conquer defects of scientific training. He takes a sane common-sense view of things, and as regards the treatment of criminals this leads him sometimes even to an advanced position, as when he advocates an unrestricted indeterminate sentence. But the possession of average sanity and common-sense is an inadequate equipment in writing a book which is prominently announced as 'a scientific study.'

It is necessary to state this clearly even at the risk of hurting the feelings of an amiable and well-intentioned writer. In the more abstract sciences there is no temptation to careless work; but in the anthropological and psychological sciences there is a temptation, even for an honest writer, to mask his scientific ineffectiveness under the human interest of his subject matter. In so far as he succeeds he discredits the science with which he occupies himself. The study of the criminal has suffered severely from this cause, and a book on this subject which proclaims itself as 'scientific' must expect severe scrutiny.

Mr. Drähms would have been well advised, and would have served better the cause of science, had he been content (like some French prison chaplains) to set down a brief and simple record of those things which during his residence in San Quentin he has himself seen and known. HAVELOCK ELLIS.

BOOKS RECEIVED.

- Physiology for the Laboratory. B. M. BROWN. Boston, Ginn & Co. 1900. Pp. viii + 167.
- Laboratory Directions for Beginners in Bacteriology. VERANUS A. MOORE. Boston, Ginn & Co. 1900. 2d edition. Pp. xvi + 143.

SCIENTIFIC JOURNALS AND ARTICLES.

THE current issue of the American Anthropologist, Vol. II, No. 3, July-September, 1900, is of unusual interest, almost the entire field of anthropology being covered by the ten articles which comprise the principal part of its 200 pages. In his paper on 'Obsidian Mines of Hidalgo, Mexico,' Professor W. H. Holmes, of the National Museum, describes the process employed by the natives in obtaining obsidian during the centuries necessary to produce the flakage so thickly covering hundreds of acres on the mountain slopes, one heap alone being estimated to contain twenty or thirty thousand cubic feet of this artificially flaked material. The process of flaking is also described and illustrated. A complementary article, 'The Obsidian Razor of the Aztecs,' by Dr. George Grant MacCurdy, of Yale University, describes and explains the distinguishing features of obsidian fracture, and shows that to them is due, in a measure at least, the excellence of obsidian as a material for knife and razor making. Early last spring Dr. J. Walter Fewkes, of the Bureau of American Ethnology, made an examination of some remarkable but little-known cavate and pueblo ruins (the latter still standing several feet in height), northeast of Flagstaff, Arizona, and he also conducted some excavations therein. The results of these observations are now exploited (with several excellent views and ground-plan drawings) under the title 'Pueblo Ruins near Flagstaff, Arizona.' Judging from the character of the houses, the pottery and other art products, and his knowledge of the traditions of the Hopi Indians, the author is inclined to attribute these now-ruined pueblos to that tribe. An excellent article by Mrs. Alice Carter Cook is devoted to 'The Aborigines of the Canary Islands,' based on information obtained from personal observation in the archipelago and intimate acquaintance with the early Spanish literature of the subject. Every phase of the life of the people is described, and type pictures of the inhabitants and their curious dwellings are given. Still another corner of the world is treated in Mr. R. H. Mathews' paper on 'The Wombya Organization of the Australian Aborigines,' in which various unusual customs are also set forth. Dr. Swan M. Burnett presents a scholarly essay on 'Giuseppe Mazzini-Idealist: A Chapter in the Evolution of Social Science,' in which is given some portions of the great reformer's labors, with the underlying principles for which he contended with such courage and persistency as have rarely been equalled in the history of human endeavor. A 'Grammatic Sketch of the Catawba Language' of South Carolina is given by Dr. A. S. Gatschet. This almost extinct tongue belongs to the Siouan stock, and but few examples of it have ever been published. Mr. Gerard Fowke, whose wide experience in archeologic investigation of the Mississippi drainage area, and his familiarity with the supposed Norse re. mains in Massachusetts (first discovered and described by the late Professor E. W. Horsford, and later by his daughter, Miss Cornelia Horsford) make his study of the 'Points of Difference between Norse Remains and Indian Works most closely resembling them' of double interest. Mr. Harlan I. Smith, of the American Museum of Natural History, presents the details of his 'Archeological Investigations on the North Pacific Coast in 1899,' conducted under the auspices of the Jesup Expedition, and H. Newell Wardle discusses the interesting 'Sedna Cycle' of the Eskimo which sheds new light on the mythology of the most northerly inhabitants of the globe. The usual 'Book Reviews,' discussion of 'Periodical Literature,' and 'Notes and News' complete the number. (G. P. Put-

nam's Sons, Publishers, New York.)