

Dr. Nordenskjöld concludes that there is no proof that the Norwegian ice extended to the British coast, and an alternative explanation that the North Sea was filled with such heavy pack-ice as to press back the glaciers which flowed from the English mountains he rejects as "extraordinarily improbable" from all the evidence given by Arctic and Antarctic ice. He makes the interesting suggestion that the shallow areas of the North Sea were filled with barrier-ice formed *in situ*, like that of the Ross Sea, and that its obstruction was the cause of the deflection of the British glaciers.

J. W. G.

#### STRUCTURE AND CARE OF TEETH.

*Our Teeth. How Built Up; How Destroyed; How Preserved.* By R. Denison Pedley and Frank Harrison. Pp. 99. (London: Blackie and Son, Ltd.) Price 5s. net.

THE authors of this little book are well known to the members of the dental profession, but as the work is obviously intended for the lay public it may be as well to state at once that both Mr. Pedley and Mr. Frank Harrison occupy a high position in dental surgery; indeed, the fact that Mr. Harrison was chosen as president of the Odontological Section of the British Medical Association and Mr. Pedley as one of the vice-presidents in 1908 sufficiently demonstrates their title to advise and instruct the general public upon things dental. The book opens with a discussion of dental anatomy and physiology, illustrated with diagrams and photomicrographs of remarkable excellence. The authors have not hesitated to employ quite high powers, even such a magnification as  $\times 2250$ ; into the actual photomicrograph they have introduced explanatory labels with lines pointing to the special objects to which it is desired to direct attention.

Obviously in a work of this kind an abstruse dissertation upon tooth-development would be out of place; the authors plump for a theory and instal it as correct. Thus on p. 30 there occur illustrations and letterpress which would lead the reader to believe that the process of enamel calcification was quite understood, and that the process in the case of dentine was universally acknowledged to consist of the conversion of the odontoblast, whereas the former is very far from settled and the latter is supposed by some of the best living authorities to be a matrix calcification not involving the cells at all; however, the process as described in the book has the sanction of very good observers in the past, and it is no drawback for a writer on a technical subject addressing a lay audience to be dogmatic.

The pictures and description of dental caries and its pathology are both excellent; the valuable work done by Dr. Miller, of Berlin, is duly recognised, but the pioneer work of Milles and Underwood in 1881 (two years before Miller's first essay) is not noticed, which seems an omission. In the 100 pp. the authors run over structure, development, nourishment, growth, disease, allied disease, and treatment, so that the gift

NO. 2130, VOL. 84]

of condensation has been required to no small extent. The style throughout is lucid and interesting, the illustrations quite remarkably good and well reproduced, and if the opinions of the authors, or the authorities upon whom they rely, are stated occasionally as *ex cathedra* and unquestionable, such treatment of scientific questions is very difficult to avoid in a work addressed to a popular audience. The authors are to be congratulated upon having produced a thoroughly clear and useful manual, and on having left no doubt possible in the reader's mind as to their own views.

#### OUR BOOK SHELF.

*The Funeral Papyrus of Ioniya.* (Theodore M. Davies' Excavation: Bibân el Molûk.) With Introduction by Edouard Naville. Pp. viii+20; plates 34. (London: Archibald Constable and Co., Ltd.) Price 21s. net.

AMONG the objects discovered by the American explorer, Mr. Theodore M. Davies, in the tomb of Queen Thiy's parents in the Bibân el Mûlûk at Thebes was the funeral papyrus of Ioniya, the father of Amenophis III.'s great Queen. This was first worked over by Prof. Newberry in 1906, who published a summary of its contents in Mr. Davies' "The Tomb of Ioniya and Touiyou" (Constable and Co.) in 1907. Photographs of the document were then placed in Prof. Naville's hands for fuller publication, and the volume now before us is the Swiss Egyptologist's account of this important eighteenth-dynasty copy of the Book of the Dead. The papyrus itself measures 9 metres 70 cm. long; it is written in linear hieroglyphs with vignettes finely executed in colour, and contains some forty chapters, one of which is new to science. This new chapter is illustrated by a vignette of nine serpents, and is entitled "Coming out of the Day." It belongs to the group of chapters of the gates and pylons where the deceased has to show his knowledge of the names of the occupants and warders. To the finely reproduced facsimiles of the document M. Naville has added a translation, based mainly on that of the standard edition of the Book of the Dead by the late Mr. Le Page Renaud—the edition which Mr. Naville himself completed and edited.

*Helmholtz. Eine Zeitschrift für die exakten Wissenschaften mit besonderer Berücksichtigung ihrer Anwendungen.* Herausgegeben von Dr. Th. v. Simson. Bd. i., No. i. (Helmholtz-Verlag: Neustadt an der Haardt, April, 1910.) Price 16 marks per volume.

ANOTHER scientific journal! It must be confessed that the necessity for the existence of this journal is not at all evident. There is no particular reason, so far as the reviewer can see, why the contents of this number could not have found a place in many other quarters.

The *pièce de résistance* is the article by Arrhenius on "The Laws of Digestion and Resorption." This consists in a "quantification" of the experimental work of E. S. London in St. Petersburg, and is decidedly interesting. After this comes a series of portentously solemn "scientific aphorisms" by C. H. Walter, which the reviewer has been quite unable to digest. There is an article by F. Fittica on "The Transmutation of the so-called Elements," in which this author tells us again how he transmuted phosphorus into arsenic (by heating it with ammonium