at all in this connection, should be restricted to the nerve-fibre process of the cell, for which they prefer the longer term *neuraxon!* Of course, as every one knows, our authors, in taking this course, are merely following the lead of a certain eminent German anatomist, it being a fashion with American scientific writers (except a few who prefer a sort of scientific Volapük) to follow pretty blindly all German scientific leads in the matter of nomenclature, and this even to the extent of bodily adopting actual German words into a language which can already find two or three synonyms for almost any word it may be desired to translate. No doubt many English authors are also to blame in this respect, but the fact is none the less to be deplored. And how can the average student be expected to understand the homologies of the nerve-cell if he is taught that he is not to call this particular unit a cell, like all the other units in the body, but is to restrict the term to a part of it only, for no other reason than the fact that when we were more steeped in ignorance of the structure of the nervous system than we are at present, that particular part of the nerve-cell was supposed to represent the whole!

Nevertheless, it may be freely admitted, in spite of the above criticisms, that many of the reproductions are extremely well done, and may with advantage be carefully studied by those who have not the opportunity of preparing for themselves specimens of like nature to those depicted. E. A. SCHÄFER.

OUR BOOK SHELF.

Flora der Ostfriesischen Inseln (einschliesslich der Insel Wangeroog). Von Prof. Dr. F. Buchenau. Dritte umgearbeitete Auflage. Small 8vo, pp. 205. (Leipzig: Wilhelm Engelmann, 1896.)

DR. BUCHENAU is well-known as a botanical author for the simplicity and lucidity of his style, and the thoroughness with which he treats his subjects; and this little book is no exception to his usual work. Indeed, it is a model of what a local *Flora* should be, in striking contrast to the bulky barrenness of some of our English county *Floras*. It will easily go into the breast-pocket of a coat, and, as it contains descriptions and other information, it may be used, and be useful, in the field. The flora of the Frisian Islands is, on account of their situation, of great interest; and Dr. Buchenau has worked out its features, composition and peculiarities, with a full appreciation of its interest. An introductory chapter of some twenty-eight pages is a summary of the author's observations on various points; observations which have been published in full elsewhere, to which references are given. The paragraph on sand-binding plants is valuable. With regard to the flora as a whole, two principal points come under consideration, namely, its composition and origin. Taking into account the area, but more especially the slight elevation, the absence of trees, and almost so of shrubs, the flora is a comparatively rich one, and includes a number of species we should hardly expect to find. Dr. Buchenau says that the commonly accepted idea that the most interesting plants of the islands are relatively recent immigrants from the mainland of North-west Germany, will not bear investigation. "The most striking plants of the islands—*Liparis Læselii*, *Gymnadenia conopsea*, *Epipactis latifolia*, *Parnassia palustris*, &c, are either wanting or exceedingly rare in East Friesland. They are only met with, by degrees, much further south. It is, therefore, inconceivable that they have migrated from the mainland in recent times, and assembled in these islands. The more probable explanation is that these plants are the remains of the old diluvial flora which from various causes have survived in the islands, though they have disappeared from the nearest mainland." I may add that Dr. Buchenau has made a special point of drawing up his descriptions, which are short and clear, from local forms. W. BOTTING HEMSLEY.

A Text-book of Physical Exercises adapted for the Use of Elementary Schools. By Dr. A. H. Carter and Samuel Bott. Pp. x + 168. (Macmillan and Co., Ltd., 1896.)

THIS book calls for notice in NATURE because the exercises in it are founded upon a physiological basis. In a lucid introduction, Dr. Carter deals with "The Physiology of Exercise," and what he says should be read and digested by every teacher who has to do with the physical training of children. A knowledge of the structure and functions of muscular tissue is essential in order to fully appreciate the value of different exercises. For to know the physiological effects of exercise, the cause of fatigue, breathlessness, the nature of muscular stiffness, the reason why rest is necessary for the renewal of reserve force and the relief of muscular pains, is to possess the ability to judge the suitability of this or that exercise for the purpose of physical development.

Physical exercises have been carried out in the schools of the Birmingham School Board for the last ten years, and Mr. Bott, who organised and directs them, has, therefore, had ample opportunity of knowing the practical conditions of the exercises he describes. It is difficult to give clear and practicable instructions for the successful performance of such exercises as those with which the book deals, but, by means of concise text and numerous illustrations, this has been satisfactorily done. These instructions, and Dr. Carter's admirable lesson in physiology, will equip teachers with all they need know in order to carry out a sensible and systematic course of physical training for children.

Der Lichtsinn augenloser Tiere. By Dr. Wilibald A. Nagel. Pp. 120. (Jena: G. Fischer, 1896.)

HALF of this interesting study is taken up by a paper on "Seeing without Eyes," in which the author considers the general question of sensitiveness to light, with illustrations from his own researches. In the second half these researches are described, and some special questions more fully discussed. The author's own observations were made chiefly on lamellibranchs and gasteropods, and showed a high degree of sensitiveness to light in the absence of anything like a visual organ. He found that some molluscs reacted especially to diminution, others to increase of light, and that this difference was correlated with other characters; those molluscs with soft shells, which bury themselves in the sand, reacted strongly to light, while those with hard shells responded more to shade. He found the highest degree of sensitiveness to light in Psammodia; and it is interesting to note, in relation to the common view as to the connection between sensitiveness to light and pigment, that the impregnated siphons of this mollusc were highly sensitive. Another interesting point investigated was the influence of repetition of a light stimulus. An oyster or mussel which has reacted to a shadow will react much less strongly, or not at all, to a second stimulus, even if much more intense, and does not recover its previous degree of excitability till more than an hour has elapsed. The book concludes with a full bibliography.