

speaking, the term gastrulation should only be used of forms in which an undoubted gastrula has been shown to be present; to use it in reference to the two-layered condition of a bird or mammal in which there is the greatest reason to doubt that a true gastrula stage exists at all, is simply to court confusion, and leads to such absurdities as the statement that "endoderm," or "ectoderm," is not homologous throughout the series of vertebrates. To give a cell-layer, the name endoderm in the various types of vertebrates is, of course, merely a short way of stating that it is homologous in these various types!

(3) Dr. Levy's book affords a short sketch of vertebrate embryology written from a practical point of view. Simple instructions as to laboratory methods are given, stress being very properly laid on the preparation of thick, free-hand sections of embryos—the great instructiveness of which is too often ignored. The chapter on technique is followed by an account of gametes and gametogenesis, then by chapters on early development in amphibia and in the chick, while the remaining half of the book is devoted to organogeny and a short chapter on developmental mechanics.

OUR BOOKSHELF.

The Change in the Climate and its Cause. By Major R. A. Marriott. Pp. 94. (London: E. Marlborough and Co., n.d.) Price 1s. 6d.; cloth 2s. 6d.

THIS book is a contribution to the great Drayson Myth, and as such it may appeal to those with whom it is a fair presumption that any theory of orthodox science is wrong, and also to those who take a curious interest in the vagaries of that class of mind.

Major Marriott, like Sir A. de Horsey in "Draysonia," complains that Drayson was not taken seriously. The fact is perfectly true, but the complaint is unjust precisely because General Drayson (not without professional precedents) failed to take seriously the position he was assailing. Astronomy is unique among sciences in its dependence on a single controlling principle, gravitation. It is open to anybody to abolish that principle and coordinate the facts otherwise—if he can. Or he may question the accuracy in detail of a mathematical deduction or demonstrate a false assumption. What he cannot do is to isolate a piece of the whole doctrine, reject the operation of the general law in the particular case on insufficient grounds, and ignore the effect of what he is doing on the whole related theory.

It would be unprofitable to comment on the errors (as we deem them) of the present work. It is pleasanter to mention the one pertinent remark which we have come across. This is the reference to the theory of "planetary inversion" (p. 66). It is quite possible that tidal

friction is slowly changing the obliquity of the ecliptic, and thus exercising a secular influence on climate. But the effect is very slow; it is not periodic; and there is little in common between the methods of Mr. Stratton and those of General Drayson and his followers.

The book deals largely with changing climatic conditions, the evidence of geology, and the bearing of the so-called astronomical theory of an ice age. But why are the possibilities limited by the tacit assumption that the radiation of the sun has been constant through geological ages, an assumption not merely unproved, but even improbable? H. C. P.

Perspective made Easy by Means of Stereoscopic Diagrams. By C. E. Benham. (Colchester: C. E. Benham, 28 Wellesley Road.) Price (post free) 6s. 2d.

THIS set of fifteen stereograms is intended as a substitute for models as used by teachers and students in illustration of some of the rules and principles of perspective projection. When viewed in a stereoscope the diagrams exhibit in relief, amongst other things, the principle of the convergence or parallelism of the projections of parallel lines in space; and the rotation into the picture plane of horizontal and vertical vanishing planes, thus illuminating the constructions relating to vanishing and measuring points for horizontal and inclined lines. An explanation is given in a sixteen-page pamphlet which accompanies the stereograms.

The idea of the author is good, but it is not very efficiently carried out. The views are not always so convincing as they might be, and the descriptions are occasionally lacking in mathematical precision. We also think that the price has been fixed too high. Nevertheless, a teacher would receive some useful suggestions by a study of the diagrams.

A Laboratory Manual of Organic Chemistry for Beginners. By Prof. A. F. Holleman. Edited by Dr. A. J. Walker. Second edition, partly re-written. Pp. xvii+83. (New York: John Wiley and Sons; London: Chapman and Hall, Ltd., 1913.) Price 4s. 6d. net.

A REVIEW of the first edition of Dr. Walker's translation of Prof. Holleman's little book appeared in the issue of NATURE for May 11, 1905 (vol. lxxii., p. 28). New experiments have been incorporated in the present edition, and some obsolete reactions have been omitted.

Engineering Workshop Exercises. By Ernest Pull. Pp. viii+80. (London: Whittaker and Co., 1914.) Price 2s. net.

THIS little book provides instructions to enable technical students and apprentice engineers to perform their workshop experiments and exercises intelligently, and to obtain practice in the use of ordinary engineering tools and appliances. Prominence is given to the value of working drawings, and accuracy is insisted upon consistently. A chapter on screw-cutting and notes on materials are included in the book.