

a welcome addition, being the result of some years of work at the Isle of Man research station. It includes the Chlorophyceæ, Phæophyceæ, and Rhodophyceæ, and embodies the results of a systematic survey of the south-east corner of the island.

The first part of the book gives an account of the way in which the marine algæ perennate, and separates them into perennials, pseudo-perennials, and annuals, basing the categories on the extent of thallus destruction in the autumn and the extent of the growing period. An interesting account is also given of the algal migrations in the littoral zone, careful observation having revealed the fact that the algæ move up and down the shore with a seasonal periodicity that can possibly be correlated with changes in external factors, such as light and temperature. In all cases the onset of unfavourable conditions appears to be heralded by copious reproduction. So little work of this kind has been published that this section of the book will be especially welcomed by algologists.

In addition to this, the authors have compiled a list of algæ for the area concerned, with their precise localities and time of reproduction. They have also constructed a key for the identification of these same genera.

The plates and maps are a useful asset, those of the former, showing the algæ *in situ*, being a particularly pleasing addition to the volume.

L. N.

*Vergleichende Stammesgeschichte: Grundlagen, Methoden, Probleme unter besonderer Berücksichtigung der höheren Krebse.* Von K. Beurlen. (Fortschritte der Geologie und Paläontologie, herausgegeben von Prof. Dr. W. Soergel, Band 8, Heft 26.) Pp. viii + 317-586. (Berlin: Gebrüder Borntraeger, 1930.) 30 gold marks.

PALÆONTOLOGY, compared with zoology and botany, suffers many disabilities, but these are in part outweighed by one advantage which the sciences concerned with living organisms cannot possess—the time factor. This advantage is particularly evident in studies dealing with the broader aspects of phylogeny. In this present work is given a detailed examination of the phylogeny of the higher Crustacea. Two main periods of development are suggested, outside which no new types have arisen. At these times development was explosive, many new types arising between which no transitional forms are found. The course of development in the many other animal groups briefly analysed by the author appears to be parallel to that given for the Decapoda: each developmental cycle is characterised by two stages, the first in which new types suddenly appear, and the second in which these types undergo continuous modification.

The work concludes with a discussion of many problems and theories of evolution, such as orthogenesis, adaptation, and function and form—"Die Funktion folgt aus der Form". Although the subject matter of the book is thus mainly bio-

logical, yet it appears likely that many of the suggestions contained in it must eventually be approached from the geological side.

*Tara: a Pagan Sanctuary of Ancient Ireland.* By Prof. R. A. S. Macalister. Pp. vi + 208 + 10 plates. (London: Charles Scribner's Sons, 1931.) 10s. 6d. net.

PROF. MACALISTER'S "Tara" is a study in archaeology and traditional history combined such as would be possible nowhere but in Ireland. He takes his readers over the ground of this famous centre of Ireland's history with the "Dindshenchas" in his hand. Point by point the account of Tara given in this 'guide-book' of the ninth century is compared with the site, and it is shown how far the structures mentioned may be identified, or with what degree of certainty the position of others may be conjectured. Prof. Macalister's plea for a scientific investigation of the site is justified repeatedly. It is a work which might well be regarded as a national duty.

Prof. Macalister is on less solid ground when he turns to the unravelling of the traditions connected with Tara. He puts forward the extremely interesting suggestion that it was the centre of a 'Twin' cult, and the sanctuary of a priest king like the Grove of Nemi, the Irish king being exposed to the same fate of slaughter by a stronger rival as the Italian ministrant of the sacred grove. Prof. Macalister's theories offer material of much interest for discussion, but without much hope of arriving at any certain conclusion on the evidence as it stands at present.

*The Psychology of Children's Drawings: from the First Stroke to the Coloured Drawing.* By Helga Eng. Translated by H. Stafford Hatfield. (International Library of Psychology, Philosophy and Scientific Method.) Pp. viii + 223 + 8 plates. (London: Kegan Paul and Co., Ltd., 1931.) 12s. 6d. net.

THE subject of this book is a very fascinating one and deals with the development of children's drawings from the first ill-defined scribbling of the infant through the formalised drawings of older children. The author points out that small children draw not so much what they see as what they know. In the final chapter, there is provided a comparison of children's drawing and the art of primitive man. It is emphasised that so many of the drawings found on cave walls, etc., and attributed to primitive man, are works of art, and could not be produced by any present-day child or adult of average ability. They are the work of the artists of the day. The drawings of children always show a formalism, stiffness, and want of expression seldom seen in the work of primitive man. There is in the work of the ancient artists a representation of expression, of movement, of reality which is not seen in the drawings of children. There is still room for a vast amount of work to be done on the development of children's drawings, their relation to eidetic imagery, to mental development, and the phantasy life of the child.