

M. Landseer Mackenzie. In architecture they give exactly what the trained eye would have us see; in landscape, as in "The Harbour at Callioure," an exquisite sense of atmosphere is conveyed—and, unfortunately, this is the only landscape in the book. The travellers had no high aim in art, history, or geography. They went to this inlet of the eastern Pyrenees because it appeared romantic at a distance. They found it less romantic, but full of charm, the charm that is rarely absent in provincial France. They wandered on foot, and made a spirited ascent of Canigou; but their real interest lay in the old-world villages, the hospitable reception at inns that treat the visitor as a friend, and the general air of remoteness in a land where Catalan is common speech. In history the Roussillon has had no special voice as to whether it should belong to France or Spain. To-day it may well be proud that its lot has lain with France. Was not Marshal Joffre, *le grand-père*, born at Rivesaltes; where the wind blows in across a great lagoon upon the frontier, a relic of the Pliocene sea that once stretched up among the hills? From Roussillon also came Commandant Raynal, the hero of the Fort de Vaux at Verdun, and many a stout defender of the northern lines.

The author, however, is not concerned with such modernities. We gather that her pleasant pilgrimage was made before the war turned all minds to other fields in France; but now the land lies once more open to adventure, and conditions of travel, as we are assured by high authority, are already settling down on their old attractive lines. Naturalists are also artists, and they may well practise their art among the eastern spurs of the Pyrenees.

G. A. J. C.

*The Journal of the Institute of Metals.* Vol. xxii. No. 2. 1919. Edited by G. Shaw Scott. Pp. xii + 428 + 31 plates. (London: The Institute of Metals, 1919.) Price 31s. 6d. net.

THE new volume of this journal opens with a report of the May lecture delivered by Prof. Soddy dealing with the subject of radio-activity. The remainder consists of the papers read at the Sheffield meeting of the institute. Of these the most discussed was one by Dr. Hatfield and Capt. Thirkell on season-cracking, in which a different view is taken from that recently put forward by Rosenhain and Archbutt, and experiments are made to determine the intensity of the internal stress in the case of cold-worked brass. The conclusion is drawn that such stresses approach very closely to the maximum stress which the material is capable of resisting. The mercury salt method has been found very useful for revealing the presence of internal stress. Some very remarkable alloys are described by Dr. Stead. Alloys of tin, antimony, and arsenic, within certain limits of composition, have the habit of forming spherical segments of striking regularity. Dr. L. J. Spencer gives a summary of the information as to the occurrence of strongly curved crystals

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in minerals, but no satisfactory explanation has yet been given of the conditions under which such curved growth takes place.

The second report to the Beilby Committee on the solidification of metals describes the isolation of crystal grains from certain metals, and a comparison of their form with that of foam cells, the facts pointing to the importance of the share taken by surface tension in determining the grain boundaries. The remaining papers deal with the early history of electro-plating, the properties of standard silver, and the structure of bearing metal, Britannia metal, nickel silver, and duralumin, and the characteristics of moulding sands for non-ferrous work.

C. H. D.

*Applied Botany.* By G. S. M. Ellis. Pp. viii + 248. (London: Hodder and Stoughton, 1919.) Price 4s. 6d. net.

THIS book is one of a "New Teaching Series" of which the publishers state: "The Series has been written by Teachers possessing valuable practical experience and gifted with the inspiration of the hour's occasion." The "secrets of plant life" are said to be "the substance of this extraordinarily interesting volume." On p. 84 the author informs us that "clover is liable to clover-sickness. Turnips suffer from the finger-and-toe disease. These diseases are caused by bacteria"; and later we learn that Desmids and Conjugate Plants are without chlorophyll. Treating of the enemies of plants, the author writes: "Bacteria turn the living tissue to a slimy and often smelling pulp. The effect is very similar to decay." The problems of potato blight have apparently been solved, for we are told that the hyphæ "penetrate the stem and reach the tubers," and "during the winter resting spores of the fungus remain in the ground and attack the next season's crop." Wart disease is a simple matter, infected soil merely being "treated with sulphur and gas lime." Potato-leaf curl is still due to *Macrosporium solani*, and winter rot to *Nectria solani*.

These are but a few of the "secrets of plant life" which are "the substance of this extraordinarily interesting volume." In addition, however, there are many sentences such as the following: "Free-swimming plants, like Chlamydomonas, must have water in which to swim"; and it is with a sorrowful interest that we read: "Very attractive and useful work may be done by studying the development of fruit, and how the seed is in the end successfully disseminated. The student who undertakes this kind of inquiry becomes at last a worthy biologist." The rest of us must learn to bear our cross with resignation.

W. B. BRIERLEY.

*Rückläufige Differenzierung und Entwicklung.* By Adolf Cohen-Kysper. Pp. 85. (Leipzig: Johann Ambrosius Barth, 1918.) Price 3 marks.

This book is a further attempt to reduce all life phenomena to mechanical principles. It announces an "ontogenetic law" worded as follows: "The part returns to a phase from which the whole is developed anew."