

exceptionally interesting native flora, and with this object he has, in addition to his various official reports, contributed from time to time popular botanical articles to different local journals. The material for several of these articles has been worked up into the more homogeneous ecological account now published by the Government of New Zealand for the benefit of private individuals and for instruction in schools.

The wealth of botanical treasures is truly great. Thus the forests comprise mixed forests—in which the ancient kauri pine, *Agathis australis* and *Beilschmiedia tarairi*, are conspicuous—and pure forests of *Podocarpus dacrydioides* and *Nothofagus*. The mixed forests are the homes of abundant lianes—to mention only species of *Metrosideros*, the liliaceous *Rhizophogon scandens* and *Lygodium reticulatum*—many tree ferns and epiphytes. No less interesting are the shrubs, chief amongst which are the subalpine species of *Olearia*, *Cassinia*, and *Veronica*, while the manuka, *Leptospermum scoparium*, and allied species play an important part in the physiognomy of the native heaths. Then again the alpine meadows are rich in floral gems, notably species of *Euphrasia*, *Ourisia*, *Celmisia*, and *Ranunculus*. Amongst plant curiosities the vegetable sheep, *Raoulia eximia*, is the most unique.

In addition to the ecology, chapters are devoted to an account of the early explorers, naturalised plants, the stories of four common plants—New Zealand flax, manuka, Fuchsia, and *Cordyline australis*—and plant cultivation. The few examples noted above will serve to indicate how rich and unique is the New Zealand flora; Dr. Cockayne's treatment is fully equal to his subject, and one could only wish that he had much more space to enter into greater detail. The numerous illustrations, although imperfectly reproduced, contribute a better realisation of the plant scenery.

*De la Méthode dans les Sciences. Deuxième Série.* by B. Baillaud, L. Bertrand, L. Blaringhem, E. Borel, G. Lanson, L. March, A. Meillet, J. Perrin, S. Reinach, and R. Zeiller. Pp. iii+365. (Paris: Félix Alcan, 1911.) Price 3.50 francs.

THE first series of studies in the methods of science by distinguished French writers was reviewed in NATURE on September 23, 1909 (vol. lxxxi., p. 361). The present volume has the same general characteristics, though the point of view is more technical and less philosophical. The following branches of science, which were not dealt with in the former volume, receive attention—astronomy, physical chemistry, geology, botany and palæobotany, archaeology, literary history, linguistics, and statistics. The essays should assist in providing the reader with a broad general view of scientific methods, and help to correct the narrowness which may result from a too exclusive absorption in a restricted field of scientific investigation.

*Essays in Historical Chemistry.* By Sir Edward Thorpe, C.B., F.R.S. Third edition. Pp. xii+601. (London: Macmillan and Co., Ltd., 1911.) Price 12s. net.

PREVIOUS editions of this valuable work have been reviewed in these columns at some length, the first in our issue for April 12, 1894 (vol. xlix., p. 551), and the second in that of August 14, 1902 (vol. lxxvi., p. 365). The present edition differs from the last in including the memorial lecture on Julius Thomsen delivered to the Fellows of the Chemical Society on February 17, 1910. We also notice an addendum to the life of Prof. Stanislaw Cannizzaro, who died at Rome on May 10, 1910.

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*School Planning at Home and Abroad.* By William H. Webb. Pp. 42. (London: The Sanitary Publishing Co., Ltd., 1911.) Price 1s. net.

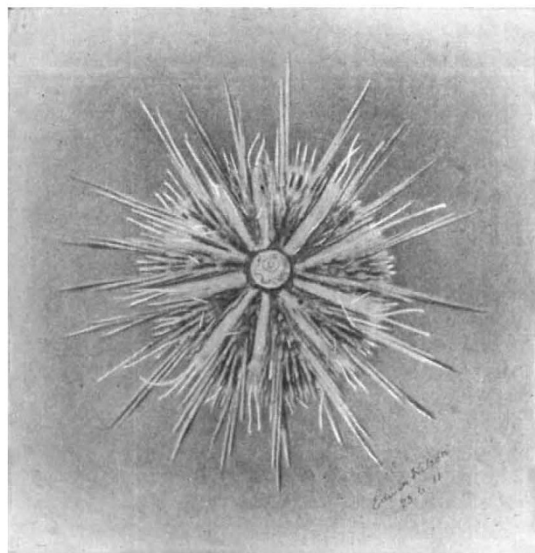
At the annual congress of the Royal Sanitary Institute, held in September last at Brighton, Mr. Webb read a paper on "Large Public Elementary Schools in Town Districts." The paper is here published in book form, and illustrated by plans and other diagrams. Mr. Webb's inquiries respecting the characteristics of school buildings in various parts of Europe and America enable him to provide those responsible for the design of new schools with many useful hints.

#### LETTERS TO THE EDITOR.

[The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts intended for this or any other part of NATURE. No notice is taken of anonymous communications.]

#### The Rearing of Sea Urchins.

I ENCLOSE a photograph which may interest your readers. It is one of a water-colour painting of a sea-urchin, magnified 4 diameters, which has been reared in my laboratory by Dr. Cresswell Shearer. It is a hybrid, a cross between *Echinus milearis* (male) and *E. esculentus* (female), both obtained from the Plymouth Marine Laboratory. The cross was effected in the early part of March last. It was kept in thoroughly aerated seawater for



some time, but has for the last three months been living in a bell-jar with part of an old crock covered by worm tubes, without the water being aerated in any way. It generally shelters in the day time under the crock. When disturbed, it moves actively away from the light, and still appears thoroughly healthy. It shows what may be done in an inland laboratory with simple appliances.

J. STANLEY GARDINER.

Zoological Laboratory, Cambridge, July 10.

#### Absorption Markings in "K" Spectroheliograms.

MR. EVERSHED'S remarks in NATURE of May 11 cause me to think that possibly an essential difference in the method employed for reproducing original negatives for journalistic purposes might go far towards explaining the difference of definition and richness of detail in M. Deslandres' plates. Anyhow, we are now assured that the Kodaikánal negatives show in the main the same structures as those taken at Meudon. Yet if the former admittedly permit such a great amount of  $K_2$  radiation to