

SCIENCE

FRIDAY, DECEMBER 27, 1912

THE ARTIFICIAL RIPENING OF BITTER FRUITS¹

CONTENTS

<i>The Artificial Ripening of Bitter Fruits:</i> PROFESSOR FRANCIS E. LLOYD	879
<i>University Registration Statistics:</i> PROFES- SOR RUDOLF TOMBO, JR.	887
<i>The Fur Seal Census:</i> GEORGE ARCHIBALD CLARK	894
<i>The Fur Seal Mortality of the Pribilof Rock-</i> <i>eries in the Absence of Pelagic Sealing:</i> M. C. MARSH	897
<i>Memorial of a Centenary</i>	898
<i>Scientific Notes and News</i>	900
<i>University and Educational News</i>	902
<i>Discussion and Correspondence:—</i>	
<i>Philippine Sharks:</i> DR. H. M. SMITH. <i>Ber-</i> <i>ardius Bairdii in Japan:</i> DR. ROY C. AN- DREWS. <i>On Citing the Types of New</i> <i>Genera:</i> PROFESSOR T. D. A. COCKERELL. <i>In the Interests of Better Speaking:</i> X. Y. Z.	902
<i>Scientific Books:—</i>	
<i>Moore's Principles of Microbiology:</i> PRO- FESSOR F. P. GORHAM. <i>Conn's Biology:</i> M. M. <i>Franz's Handbook of Mental Ex-</i> <i>amination Methods:</i> F. L. W. <i>Ries on</i> <i>Building Stones and Clay Products:</i> DR. GEO. P. MERRILL	904
<i>Special Articles:—</i>	
<i>The Relationships of the Chestnut Blight</i> <i>Fungus:</i> DR. G. P. CLINTON	907
<i>The Convocation Week Meeting of Scientifico</i> <i>Societies</i>	914

MSS. intended for publication and books, etc., intended for review should be sent to Professor J. McKeen Cattell, Garrison-on-Hudson, N. Y.

THIS subject has been chosen not only because of a certain intrinsic interest which I trust will presently be admitted, but because also it serves to illustrate the important contention that the problems of pure and applied science go back for their solution to the same fundamental principles. It is true that empiricism has solved, in a measure, many practical problems, and that, indeed, science has grown out of empiricism. But science in her turn leads more rapidly and surely to the goal which is sought, for the simple reason that she explains why things happen as they do. For a single and almost overworked example, the ancients knew that peas and clovers enriched the soil, and this knowledge led to the practise of rotation in the planting of crops. But it is very recent knowledge that this behavior is due to the peculiar relations of certain bacteria to a limited group of the higher plants known collectively as the legumes, by which the free nitrogen of the air is made available to the latter. The economic salvation of immense areas, yet to be accomplished, may now be compassed with this knowledge—a very practical outcome. On the other hand, the understanding of the nitrogen relations of plants has stimulated the chemist to discover a method, and if possible an economical method, of fixing atmospheric nitrogen, so that this vast storehouse of material may be rendered more available, the solution of which problem could not by any chance have been attained except by

¹ The university lecture, October 8, 1912.