

ported in a previous paper¹ are confirmed. Proven cultures from *Vigna sinensis* and *Glycine hispida* were repeatedly stained and examined, the organisms in every trial being found to have a single polar flagellum.

Attention was then turned to the organisms, which had before given unsuccessful stains owing to the more abundant slime production. Pure cultures isolated from the nodules of *Trifolium pratense*, *Vicia villosa*, and *Melilotus alba* were tried, this time successfully, though the staining of these organisms is obviously more difficult and uncertain. The bacteria in every case were found to be peritrichous. It was further noted that whereas the organisms of *Vigna* and *Glycine* have a very stout flagellum, the flagella of the organisms from *Vicia*, *Trifolium*, and *Melilotus* are much finer.

This confirms the work of De Rossi, Kellerman, Zipfel, and Prucha (but one convincing photomicrograph exists, that by De Rossi of *Trifolium repens*), and attention is called to the fact that these workers devoted their efforts to the more slimy group, *i. e.*, *Vicia*, *Trifolium*, *Pisum*, *Phaseolus*, *Medicago*.

It is now evident that on the basis of flagellation, the nodule bacteria are to be divided into two distinct groups; the *Glycine-Vigna* group, and the *Trifolium-Vicia-Melilotus* group. Further observations confirming this grouping and dealing with cultural and physiological characteristics as well as with the systematic position of these and related organisms, will be the subject of a paper entitled, "The Nodule Bacteria of Leguminous Plants" soon to be published by Lohnis and Hansen.

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THE SUPPOSED SCALES OF THE COTTID FISH JORDANIA

THE Cottidæ are in general scaleless, but the rare fish *Jordania zonope* Starks, from Puget Sound, is said to have the body above lateral line closely covered with ctenoid scales. Dr. D. S. Jordan has very kindly sent me fragments of one of the cotypes and

¹ Ill. Agr. Exp. Sta. Bul. 202.

the appearance is exactly as described. But when the material is treated with hot caustic potash, it is found that the apparent scales are nothing more than rows of strong ctenoid spines, placed as they would be in true scales. In the dorsal region the rows are curved as they would be were they margins of ctenoid scales. In the presumably related fossil *Lepidocottus brevis* (Agassiz), from the European Miocene, the ctenoid elements are as in *Jordania*, but the complete scales are present, with the circuli and basal radii as usual. It must be supposed that *Jordania* came from such an ancestor, and represents the survival of certain elements of scale structure without the scales, something like the grin of Lewis Carroll's Cheshire cat.

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REPORT OF THE COMMITTEE OF THE AMERICAN CHEMICAL SOCIETY ON THE PREPARATION OF A LIST RECOMMENDING CHEMICAL TEXTS FOR LIBRARIES

ON January 15, 1919, announcement was made of the appointment of Messrs. W. A. Hamor, A. M. Patterson, and L. C. Newall, as a committee for the preparation of a text for the use of librarians, in recommending books for the chemical reading of the public, in accordance with the suggestion submitted to President Nichols by Mr. Joseph L. Wheeler, librarian of the Youngstown Public Library, Youngstown, Ohio. Following the presentation of its preliminary report¹ at the Buffalo, N. Y., meeting of the society, the committee membership was strengthened by the addition of Mr. Wilhelm Segerblom.

The study of the needs of librarians which was conducted by the committee at the inception of its work, made it clear that what was most desired was an authoritative series of *reading courses*, and not a mere book-list, on chemical subjects. In fact, Mr. Wheeler formally requested a mode of presentment consisting of running texts so prepared that the

¹ See *J. Am. Chem. Soc.*, 41, 95-96 of *Proceedings*.