

legislative, administrative, technical, and practical problems of irrigation, in course of preparation and publication, by William Ham Hall, state engineer, California." This outline is 304 pages in length, and is an exhibit of the character of the report in preparation, which will be in seven books, forming five or six volumes, of five hundred pages each, or from 2,500 to 3,000 pages in all. How the compilers are paid is not stated; but judging from the following sentence,—"Great public works, such as national roads, railroads, basins and docks, canals and the canalization of rivers, whether enterprises of the state, of departments, communities, or of particular companies, whether toll is to be charged in any way or not, or whether a subsidy of treasure is to be granted or not, or whether any part of the public domain is to be used or not, can only be executed by virtue of special law, which can be passed only after an administrative inquiry has demonstrated the feasibility and desirability of the work, and a report has recommended it,"—which is a fair sample of the book, we presume they are paid by the word; the idea evidently being that of quantity, and not quality. A thorough investigation of the problem of irrigation, as developed in the old world, with reference to the new, would be of almost inestimable value; but the work should be concise, stating briefly the old laws, the work done in each country, the necessity and uses of irrigation as drawn from these examples, the land to be irrigated in California, and the plan to be adopted. If the book had been written with these ends in view, it would have been generally read and widely useful. Now few will read it, for it is necessary to look for the facts in a volume of words as you would for a needle in a haystack. We trust the legislature of California will thoroughly revise the work, and see that it is made less expensive and more useful.

ALTHOUGH THERE HAS BEEN within recent years a great multiplication of biological journals in Europe, many of which, from the character of the articles they have published, take high rank, yet they have nearly all been in fact, if not in name, confined almost exclusively to physiology and morphology. This is especially the case with the zoological periodicals, none of the best of which touch, except incidentally, upon the systematic, geographical, or biological departments of the science. In three fields there are special journals, with their *clientèle* principally among

amateurs. We refer to entomology, ornithology, and conchology. There is certainly a great deal of work in zoölogy, of great value and interest, and quite outside of either morphology or physiology. It would be a great convenience if there could be a journal which included a large fraction of the work of the character indicated.

We are glad to learn that such a journal is to be inaugurated in Germany, under the title *Zoologische jahrbücher*, and the sub-title *Zeitschrift für systematik, geographie und biologie der thiere*. It is to be edited by Dr. J. W. Spengel of Bremen, and published by Fischer at Jena. It is desired to give it a distinctly international character, and it is hoped to secure the co-operation of American zoölogists. The editor justly attributes special value to thorough monographs, either of large or small groups, from any part of the animal kingdom, and to faunal papers. The division of the journal devoted to the life-histories of animals ought to prove peculiarly interesting and valuable. It is high time that something more was made of these than mere curiosities—which, in most cases, is all they pretend to be. Those who intend contributing will be pleased to know that articles will be published in German, French, English, or Latin; and that the authors are furnished with forty reprints of them, besides being paid a small sum. That the new journal will be of a high character, the editor's name assures us. Dr. Spengel is one of the best-known and ablest of the younger German zoölogists. His memoirs on the urogenital system, and on *Bonellia viridis*, are of altogether exceptional value, and are familiar to all scientific morphologists.

#### THE MODE OF ADMISSION INTO THE ROYAL SOCIETY.<sup>1</sup>

OUR contemporary *Science*, in the last number which has reached this country, makes some remarks concerning the admission of candidates into the Royal society, against which, in the interests of truth and accuracy, it is our duty to protest, the more especially as it is also implied that the French system of canvassing those who are already fellows of the society is also adopted.

The statements actually made are, 1°, that there is an "actual competitive examination, on the result of which a certain number of successful candidates are annually chosen;" and, 2°, "that the English method has the additional disadvantage

<sup>1</sup> From *Nature* of Nov. 19.

that it does not secure the men whom it is most desirable to honor." We read also, "During the school-boy period the distinction between different individuals is a distinction of learning, and an examination is not unfitted to discover the boy who deserves reward. But learning is not the quality which a state needs to make it great. Casaubons are not the kind of men who have built up English science. The qualities which ought to be encouraged, and which it should be a nation's delight to honor, are qualities too subtle to be detected by a competitive examination."

For the benefit of our transatlantic brethren, we may as well state the facts as we know them. For reasons into which we need not enter here, as they do not affect the question at issue, nearly forty years ago the Royal society determined to limit the yearly admissions to fifteen; and to throw upon the council the responsibility of selecting the fifteen who are to be nominated for election, a general meeting of the society reserving to itself the right of confirming or rejecting such nomination. It may be instructive to remark that for thirty years that right has not been exercised.

The way in which the matter is worked is as follows: The friends of a man, who are already in the society, and who think he is entitled to the coveted distinction, prepare a statement of his services to science, in many cases without consulting him in any way. This paper, thus prepared, is sent round to other fellows of the society, who are acquainted with the work of the candidate, and who sign it as a testimony that they think he is worthy of election. In this way, when the proper time arrives, some fifty or sixty papers are sent in to the council for their consideration. In the council itself we may assume that the selection of the fifteen is made as carefully as possible, in view not merely of individual claims, but of the due representation of the different branches of science. It is not for us to state the safeguards or mode of procedure adopted, but we think we may say that the slightest action or appeal to any member by the candidate himself would be absolutely fatal to his election. Finally, we may say that, years back, when a heavy entrance-fee had to be paid, there were cases in which the question had to be put to one whose friends were anxious to see him elected, whether he would accept election. The small yearly subscription of £3, now the only sum payable, makes even this question unnecessary at the present time.

[How does it happen that our English contemporary makes no allusion whatever to Professor Chrystal's address to the British association, which, as printed in *Nature*, gave rise to all our animadversions? — Ed.]

### HISTORY OF ANGLO-SAXON.

PROFESSOR WÜLKER, although literary executor of Grein, and editor of the new 'Bibliothek,' has nevertheless found time to prepare a most useful book for all students of English literature and English philology. Ten Brink's excellent history was purely literary; something of the same kind, though less able, was Earle's 'Anglo-Saxon literature,' published last year. Quite otherwise with Wülker: he furnishes a supplement, not a rival, to Ten Brink's book, paying little attention to actual contents, but giving the fullest account of the new literature which has grown up by way of comment on the old. Ten Brink gave us a description: Wülker gives us a guide-book, — a much-needed help for the student, and a basis for all new work. Wülker's tone is judicial and dignified; his decisions are as impartial as one could expect; while the enormous labor involved in sifting so many dust-heaps — dissertations, programmes, etc. — cannot be praised too highly: for, though it is true that for one man who is able to write literature there are a thousand who can judge and classify facts, it is equally true that the thousand are sure to scorn facts, and rush into original work.

The first section of the book contains an account of Anglo-Saxon philology in different countries. From the first steps under Elizabeth and Archbishop Parker, from the worthies who thought that Anglo-Saxon was the speech of Adam in Paradise, the growth of this study, at first under legal and theological shelter, is carefully traced to our own time. Wülker's criticism of the earliest efforts is properly indulgent; otherwise with modern failures, as where Loth's 'Grammar' (1870) is neatly despatched with the remark, "What is right in the book is old, and what is new is wrong." We have pleasant glimpses of a woman, Elizabeth Elstob, editing and translating Aelfric's 'Homilies,' having audience of Queen Anne in the interests of Anglo-Saxon, and afterwards (1745) publishing the first Anglo-Saxon grammar written in English. A century later Miss Gurney makes the first English translation of the 'Chronicle.' For American scholarship Wülker has encouraging words, and remarks that Anglo-Saxon is much more studied here than in England.

The second section gives a list of all books which aid in the study of Anglo-Saxon philology and literature; and here one feels afresh the enormous preponderance of German scholarship. Aside from living scholars, what would our philology be

*Grundriss zur geschichte der angelsächsischen litteratur, mit einer übersicht der angelsächsischen sprachwissenschaft.* Von Dr. RICHARD WÜLKER, ord. professor an der Universität Leipzig. Leipzig, Veit & Co., 1885.