

1899, was permitted to hold a public meeting and elect a captain municipal, or mayor. The plan of electing local administrative officials at town meetings was extended during the next few months to Santa Ana, Pandican, San Pedro, Macato, Pasig, Patero, Malabay, Paranque, Los Pinar, Bacoar, Imus, San Felipe Neri and a few others. The success of this experiment led to the installation of similar municipal governments in towns that subsequently passed under American control.

Owing to the conditions existing, some control over the local governments by army officers was necessary, especially in financial matters, but that control was gradually lessened until it became little more than advisory. While in some cases the municipal officers elected were in active, though secret, sympathy with the insurgents, many were assassinated because of their loyalty to the United States.

In 1900 a general order (No. 40) was adopted, applicable to any town in the archipelago, substituting for supervision by local commanding officers the right of appeal to the military district commander. It also provided for election by ballot and for limitation of the franchise. That order was subsequently modified by the municipal code, promulgated by the Taft Commission and is now the municipal organic law of the islands. The code extended the franchise, required expenditure for public schools, restricted the forms of local taxation, and provided for a centralized system of collecting the revenues. The early success of liberal and progressive local self-government prepared the way for the civil government now auspiciously instituted.

The following papers were read by title:

The Progress of Irrigation as disclosed by the Returns of the Twelfth Census: F. H. NEWELL, Hydrographer, U. S. Geological Survey, Washington.

Progress in Insurance Engineering: EDWARD ATKINSON, Boston.

The Practical Handling of Woodlands: GIFFORD PINCHOT, Forester, U. S. Department of Agriculture, Washington.

Public Protection of Private Savings: JAMES H. BLODGETT, U. S. Department of Agriculture, Washington.

Local Life by Local Time, Expressed in Standard Time: EDWARD S. WARREN, Newton, Mass.

Voluntary Associations Among Cuban Working People: VICTOR S. CLARK, Washington.

Social Bacteria and Economic Microbes, Wholesome and Noxious: A Study in Smalls: EDWARD ATKINSON, Boston.

The Formative Period of a Great City: A Study of Greater New York: WILLIAM H. HALE, Brooklyn.

FRANK R. RUTTER.

Secretary.

SCIENTIFIC BOOKS.

Die deutschen Universitäten und das Universitätsstudium. Von FRIEDRICH PAULSEN. Berlin, Verlag von A. Asher & Co. 1902. Pp. xii+575.

Professor Paulsen aims in his new book to give a systematic account of the nature, function, organization and historical development of the German university. Owing to the exalted position which the German university occupies in the world of education, and the universal nature of the problems discussed by Professor Paulsen, his work will be of value not only to his own countrymen, but to persons interested in the subject everywhere. It ought to be studied by every man who takes any part in university legislation, whether as president, professor or member of a controlling board, and by every student who desires to get the most out of his university course. It is so rich in valuable information, so full of practical suggestions, that it cannot fail to prove

useful and helpful to all who sincerely desire to perform the tasks growing out of their connection with university life, in the best possible manner. Particularly in this country where things are in the transition state and where, in spite of much that is crude and charlatanical, the desire is strong to assimilate all that is good in the higher institutions of other countries, will a work like this assist us in finding the right path.

After an introductory chapter (pp. 1-11) in which he describes the general character of the German university and contrasts it with the French and English types, the author divides his subject matter into five books. In the first (pp. 15-82) he traces the historical development of the German universities from the Middle Ages down to the present time. Professor Paulsen is fond of historical surveys of this kind, which help us to see things in the proper perspective and enable us to give them the right values. Such a study of growth will show us Americans how primitive many of our conditions are, and at the same time inspire us with the hope that they must pass away. In Book II. (pp. 85-200) Professor Paulsen discusses the present organization of the German university and its place in public life, its legal status, its relation to the State, to society and to the Church. Among the interesting subjects taken up here are: The legal relations of university teachers, salaries and fees, the filling of professorships, the legal status of private docents, the education of women, university extension, the position of university men in society, the protestant theological faculties, the catholic theological faculties, the participation of the different religious sects in university study. Book III. (pp. 203-335) is devoted to the university teacher, university instruction, and *Lehrfreiheit*, considering subjects like the following: The system of private docents, the personal relations between teacher and student, the lecture system, seminars and exercises, exercises for beginners, medical and scientific institutes, university pedagogy, theology and *Lehrfreiheit*, philosophy and *Lehrfreiheit*, the political and social sciences and *Lehrfreiheit*, the professors and politics, the uni-

versity's function with respect to political education and public life. Book IV. (pp. 339-488) has to do with the student and 'academic study,' discussing, among other things, the significance and dangers of academic freedom (in the sense of the freedom of student life), preparatory training, the course of study, the elective system (*Lernfreiheit*) and the 'compulsory' system, the length of the university course, vacations, selecting and changing one's university, the objects and the means of university study, how to read and how to work, general culture, examinations, state examinations, the student and politics, the social mission of university students, and student societies. While the preceding book will serve as a guide to the university teacher, this book will be found to be particularly helpful to the student, bringing system and order into his academic life. In the last book (pp. 495-562) the different 'faculties,' theology, law, medicine and philosophy, are carefully reviewed and their aims described. It gives one an insight into the nature of the different 'faculties' or schools, as we often call them, and of the professions for which they provide the training.

Our country has learned much from the German universities, and it is largely owing to this that we occupy the position in the scientific world which we already occupy. It is safe to say, however, that we still have a great deal to learn, and that a book like Professor Paulsen's can point the way to new ideals. We have not yet reached the development of which we are capable. For one thing we have not yet reached that degree of inner freedom which the German university enjoys and to which Professor Paulsen attributes the wonderful advance which has been made in higher education in the nineteenth century. The one-man power, which exists in many of our institutions, the interference of governing boards with purely academic matters which should be left to faculties or individual teachers, the influence of politics and sectarianism, the unhealthy pressure sometimes exerted by the fear of losing appropriations, all these are problems which have not yet been

wholly solved, but which must and will be solved before the American university will become what it can become. Of course, this absence of inner freedom of action is often due to the primitive condition of many of our universities or to the fact that many of them are in the transition stage from college to university, and will disappear as these institutions more closely approach the university ideal. But whatever may be the causes and excuses for these conditions, the truth is there is more 'paternalism' in the universities of this 'free' country than in those of military Germany. There are dangers connected with freedom, very true, but these dangers cannot be avoided and are the price we must pay for the blessings of liberty.

Another element of strength of the German university, one that could not develop without the factor just mentioned, and without which the university could never have reached its present status, is the spirit of investigation among its members. The German professor is, above everything else, a scientific investigator. This phase of development also has its shadow sides and dangers, as Professor Paulsen shows. But it is true, nevertheless, as he says, that the position which the German people at present holds in the scientific world, it owes in the main to its universities, and these owe what they are and what they accomplish to the principle on which they are based: they are scientific institutions and their teachers are scientific investigators. And that is just exactly the goal at which our own best universities are aiming—in spite of the protests of small colleges that do not see that the function of the university is not identical with that of the college—and why they are beginning to inspire respect in foreign lands.

It would, of course, be impossible to touch upon all the interesting topics taken up by Professor Paulsen, within the narrow compass of this review. The most vital questions of university education are discussed by the author in his usual sensible, quiet and sane manner. He tries to see the things as they are, their good and bad sides, and he speaks as one who knows. His remarks on the lecture system, which, when supplemented by

seminars and practical exercises, he regards as the best, on the whole, and his views on the elective system (*Lernfreiheit*), will prove helpful to many of us, at the present stage of our development. His defense of the German system of appointing professors, which is frequently attacked in Germany, is also interesting. The German plan is not perfect, of course; no system can be perfect that is applied by imperfect human beings, and illegitimate influences will always play their part in the selection of professors as long as human nature remains what it is. At the same time, it seems to me, the Germans are much more careful and impartial in their choice and maintain a higher standard than we do. Local, personal, political and sectarian influences are stronger with us than with them. It is true also that we are making great improvement along this line, and that the results are seen in the greater efficiency of our faculties, but appointments are frequently made in the United States, even in good universities, which 'outsiders' do not understand and the initiated understand only too well. We shall outgrow all that too, but we have not outgrown it yet.

This book of Professor Paulsen's is, in my opinion, the most satisfactory exposition of university problems and the most helpful practical guide in solving them that has been published in recent years, and cannot fail to find an appreciative circle of readers. It will bear good fruit in our country and increase the debt of gratitude which we owe to the German universities for what they have done for our higher education.

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DISCUSSION AND CORRESPONDENCE.

'SO-CALLED SPECIES AND SUBSPECIES.'

THE article in the issue of SCIENCE for August 8 (N. S., Vol. XVI., pp. 229-231), under the above caption, is opportune, even if the author falls somewhat short of hitting the mark. He appropriately takes as his text Mr. Oberholser's recent 'Review of the Larks of the Genus *Otocoris*,' and presents the layman's view of the deplorable addition of a number