Pan-Pacific Science Congress, Australia, 1923.

WHILE not on so extensive a scale as, nor with the Imperial significance of, the Australian meeting in 1914 of the British Association for the Advancement of Science, the second triennial Pan-Pacific Science Congress, which has just met in Melbourne and afterwards in Sydney, may mean very much to the development of organised knowledge of, and in, countries bordering upon the Pacific Ocean. The first gathering of the kind was held in Honolulu in 1920, and as a matter of fact it was really the sequel to ideas that originated during the British Association visit to Australia and later were warmly fostered by Prof. W. M. Davis (Harvard), Prof. H. E. Gregory (Yale), Dr. T. Wayland Vaughan (U.S. Geological Survey), Mr. A. H. Ford, and others. The Pan-Pacific Union, a wide organisation with the general aim of promoting harmonious relations between the peoples of the Pacific, stood behind the Honolulu Congress, but future Science Congresses will undoubtedly all be under the general direction and control of the National Research Councils of the countries concerned.

The Commonwealth Government is acting as host for the 1923 gathering, the organisation being in the hands of the Australian National Research Council, of which Sir David Orme Masson is president. State Governments are generously supplementing the Commonwealth's financial and other assistance, and it has been possible in many cases to make grants helping to defray travelling costs for delegates from distant countries. The prevailing high rates for steamship travelling are a grave difficulty in the way of international assemblies in a region of such vast distances as the Pacific. Happily the interest of the Governments of the chief countries concerned has been aroused, and invitations, conveyed through the Colonial Office, to send official delegates, have met with much response. Unfortunately the South American Republics, with few exceptions, have regretted that their financial conditions do not permit the sending of official representatives. Even more unfortunate is it that France has not seen fit to send a delegation. Nevertheless, with eleven visitors from Great Britain, nineteen from the United States of America, three from Canada, eight from Hawaii, twelve from Japan and Formosa, nine from the Philippines, six from the Netherlands and the Dutch East Indies, eleven from New Zealand, and smaller delegations from British Malaya, Burma, Tahiti, Papua, Fiji, and Hong Kong, a very fairly representative gathering is assured. While in Australia, all visitors from overseas are the guests of private citizens or institutions and are receiving the privilege of free railway travelling before, during, and after the Congress.

To transfer a congress after ten days in one city to another some six hundred miles distant must militate against consecutive work and lead to a certain amount of overlapping; but the advantages in enabling visitors to see more of the country, and in increasing the numbers of local workers who come into personal contact with them, more than counterbalance the obvious disadvantages.

Needless to say, an extensive series of excursions has been arranged, the principal excursions, over long distances, necessarily coming after the official business in Sydney has been concluded. Visits to Broken Hill, Irrigation Areas, Artesian Water Areas, Great Barrier Reef, Northern Rivers to Brisbane, Canberra and other parts of the Commonwealth, are proposed.

The scientific work is being carried on in eleven Sections. As, however, it has been a deliberate object of the organisers to avoid a multiplicity of papers on single and more or less isolated topics, and to aim instead at broad general discussions, there are several joint meetings between Sections. The Sections comprise: I. Agriculture; II. Anthropology and Ethnology; III. Botany; IV. Entomology; V. Forestry; VI. Geodesy, Geophysics, Radiotelegraphy, etc.; VII. Geography and Oceanography; VIII. Geology; IX. Hygiene; X. Veterinary Science; and XI. Zoology.

The agriculturists are concerned chiefly with the problems presented by diseases in wheat and other cereals, sugar-cane, cotton, tobacco, bananas, etc., and on the serious difficulties to be faced in controlling weed pests. Proposals for plant quarantine regulations may represent an immediate practical outcome. Agricultural education and research, soil surveys, and irrigation questions are also being discussed, while much interest is being taken in a joint discussion with the zoologists and veterinarians upon genetics, with special reference to the improvement of farm animals.

In anthropology and ethnology the Congress is attacking the fundamental problem of how best to organise and carry out research work in the Pacific Islands before it is too late. The matter is very urgent indeed. Expressions of opinion have been invited from leading ethnologists in Great Britain who cannot be present in person, and it is hoped that, so far at least as the British islands are concerned, a practical working scheme may be evolved, to be submitted later, with the full weight of the Congress behind it, to the Commonwealth Government. Sir Baldwin Spencer, who has just returned from yet another visit to the interior, is bringing forward the allied, yet distinct, question of future research in regard to the Australian aborigines. Another wide topic under consideration, in common with the Hygiene Section, is the recent rapid decline in native population in the islands, while there are also discussions upon the physical anthropology of various Pacific types, and the race relations between them.

Botany, entomology, and forestry have much in common in several proposed discussions upon timbers, and with zoology the matter of introduced pests and their natural enemies is being taken up, especially the increasingly serious problem of checking the spread of tropical boring insects.

The physical work of the Congress centres mainly round geodesy, terrestrial magnetism, meteorology, and seismology, while the highly practical international matters of radiotelegraphic communications and determinations of longitude by wireless, are also being discussed. Solar physics research, for which many maintain that more is being claimed on the purely practical side than it will yield, and the need for its endowment by Governments, is a subject for vigorous debate.

Those members concerned with geography and oceanography are meeting with the physicists frequently, especially when discussing questions of cartography and meteorology. Definite proposals are being made for continuing and extending, by local effort, the invaluable hydrographic work of the Royal Navy, and for international collaboration in oceanographic work.

As might be expected, the largest Section is that devoted to Geology. The structure of the Pacific Basin, Post-mesozoic volcanic action in the Pacific, ore provinces, correlation of Kainozoic formations, coral reef formations, glaciation, Carboniferous and Permian problems in the Pacific Region, are among the more general matters before the Section.

Two main subjects discussed in the Hygiene Section,

at Melbourne, are mining hygiene and a general survey of the hygiene of the Pacific Region. The basis for discussion of the latter is a summary of replies received by the director of the Commonwealth Department of Health to a widely circulated *questionnaire* relating to yellow fever, malaria and filariasis, bubonic plague, small-pox, leprosy, beri-beri, hook-worm disease, and tuberculosis. In Sydney, the principal topics are climate in relation to human efficiency, meteorological standards in relation to comfort, and insects in respect to hygiene.

The work of the Veterinary Science Section is mainly in joint meetings with allied Sections, such as Agriculture and Zoology, in dealing with parasitological and other problems. Proposals are being put forward with regard to international notification of animal diseases.

Finally, the Section of Zoology is undertaking, in addition to much conjoint work with other Sections, a general survey of the many questions now arising in connexion with Pacific fisheries and the establishment of marine biological stations.

The main aim of the Congress is to deal with wide subjects, many of them of international significance, from a practical as well as a purely scientific point of view. A. C. D. RIVETT.

University and Educational Intelligence.

WE learn from the *Chemiker Zeitung* of the following appointments: Dr. W. Schumann, director of the Institute of Technical Physics at Jena University, to be professor of theoretical electrotechnics at the Munich Technical College; Dr. Julius Schmidt, of the Stuttgart Technical College, to be reader in chemistry at the Engineering College, Esslingen; and Dr. K. Fajans, to be assistant professor of physical chemistry at the University of Munich.

THE trustees of the Laura Spelman Rockefeller Memorial, founded in October 1918 by John D. Rockefeller in memory of his wife, have published a report on their appropriations, amounting to nearly 13 million dollars, up to December 31, 1922, on which date the corporation's assets amounted to 78 million dollars. Grants classified under the head "Education" amounted, in the four years 1919–1922, to 6000, 9000, 286,000, and 500,222 dollars respectively, and included 30,000 in 1921 for the American College for Girls at Constantinople, 110,530 dollars in 1922 for Robert College of Constantinople, the American University of Beirut, and the Constantinople Women's College, and 600,000 dollars for the Women's Union Christian Colleges in the Orient. For boy scouts and girl scouts grants amounting to 193,000 dollars were allocated, and an appropriation which will amount to more than 55,000 dollars was made for the inauguration of courses of instruction for scout leaders in universities and women's colleges. Such courses, it is noted, are given in 42 institutions, and in 13 of them the expense of instruction has already been taken over by the college. Scientific research interests the trustees because they "believe that knowledge and understanding of the natural forces that are manifested in the behaviour of people and of things will result concretely in the improvement of conditions of life," but grants for promoting it have hitherto been small: 13,000 dollars in 1921 and 37,500 in 1922, including 10,000 for the Mme. Curie Radium Fund. The Y.M.C.A. and Y.W.C.A. and other social welfare organisations received 3,299,000 dollars; religious organisations, 1,975,000; emergency relief, 1,543,000; and public health, 692,000.

A REPORT on the development of higher education in Poland has been issued by the Chief Statistical Office of the Polish Republic. For the five State universities the report shows the following student enrolments:

	Cracow.	Warsaw.	Lwów.	Poznań.	Wilno.	Total.
1920–21 . .	4136	5787	3639	2094	788	16444
1921–22 . .	4531	7518	4773	3273	1729	21824
1922–23 . .	5235	8939	5646	3416	2202	25438

For the technical State schools the respective numbers are:

	T.H. Sch., Warsaw.	T.H. Sch., Lwów.	Agric. Coll., Warsaw.	Sch. of Min., Cracow.	Total.
1920–21 . .	2931	2178	787	179	6075
1921–22 . .	4112	2305	761	282	7460
1922–23 . .	3868	2560	906	462	7796

The following figures show the number of students admitted in 1922–23 to other higher schools and professional colleges: Independent University, Lublin, 1120; Free Polish University, Warsaw, 1664; College of Commerce and Economics, Warsaw, 988; Veterinary College, Lwów, 327; Teachers' College, Warsaw, 124; School of Fine Arts, Cracow, 155. Of the total number of students, about 24 per cent. were women. Nearly 27 per cent. were enrolled in faculties of jurisprudence, 13 per cent. in faculties of medicine, 17 per cent. were engaged in the study of technology, mechanical and electrical engineering, etc., about 6 per cent. were students of agriculture, and 30 per cent. devoted themselves to the study of philology, history, mathematical and natural science, philosophy, and education.

LISTS of colleges and universities "accredited" by various agencies are published in Bulletin, 1922, No. 30, of the United States Bureau of Education. The standardising movement has advanced rapidly during the past ten years, and the lists published in 1917 already need revision. The agencies in question are: certain State universities and departments of education, the Carnegie Foundation for the Advancement of Teaching, the Association of American Universities and several other voluntary educational associations, and church boards of education. The Bureau is careful to announce in large type that "there is no comprehensive classification of collegiate institutions by any national governmental agency." The longest of the lists is that drawn up by the University of California of 286 institutions from which holders of bachelor degrees representing the usual college course of four years will be admitted to its own graduate division. Commenting on the lists, the compiler notes that the standards used are very various and the basis of classification in some cases is very vague, while "there is no practical consensus of opinion as to what constitutes that much-talked-of entity, the standard college." He finds ground for hope of a coming approximation to uniformity in this regard in the fact that a committee appointed for the purpose by the American Council on Education has formulated certain principles and standards for 4-year colleges and universities which have been adopted in whole or in part by some of the accrediting agencies. Among these principles are: "Teaching schedules exceeding 16 hours per week per instructor, or classes (exclusive of lectures) of more than 30 students, should be interpreted as endangering educational efficiency"; and "the minimum annual operating income, exclusive of payment of interest, annuities, etc., should be $50,000, of which not less than $25,000 should be derived from stable sources, other than students, preferably from permanent endowments."