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CONTENTS.

	PAGE
Mr. Ormsby-Gore and Tropical Development	37
Neurology and Psychology. By Dr. J. C. Eccles	40
The Works of Roger Bacon. By Dr. Charles Singer	41
Preservation of Animal Remains. By Prof. D. M. S. Watson, F.R.S.	43
Euclidean Geometry	44
Our Bookshelf	45
Letters to the Editor :	
The Transmission of Ultra-violet Light through Tracing Cloth.—C. H. Young	47
A New Band System of Carbon Monoxide.—Ranga K. Asundi	47
Striations in High Frequency Discharges.—Dr. S. P. McCallum and W. T. Perry	48
Critical Potentials of Light Elements for Simultaneous Transitions.—B. B. Ray and R. C. Majumder	49
The Electromotive Behaviour of Single Metal Crystals.—Dr. Paul A. Anderson	49
Investigations of the Scattering of Light.—Prof. C. V. Raman, F.R.S.	50
A Fresh-water Medusa in England.—Prof. Sydney J. Hickson, F.R.S.	50
The Instability of a Single Vortex-Row.—Prof. W. A. Osborne	50
Nitrogen Fixation: the Growth of a New British Industry. By A. A. E.	51
Biology and Education. By Prof. F. A. E. Crew	54
Antarctic Discoveries. By R. N. R. B.	57
Obituary :	
Dr. C. R. Young, O.B.E. By J. F. T.	58
News and Views	59
Our Astronomical Column	63
Research Items	64
The South Africa Meeting of the British Association	67
Science Masters' Association. CAMBRIDGE MEETING	67
Whales Landed in Scotland	68
University and Educational Intelligence	69
Calendar of Patent Records	69
Societies and Academies	70
Official Publications Received	71
Diary of Societies	71

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Mr. Ormsby-Gore and Tropical Development.

THE attributes of a true research worker are high intellectual endowment, a desire for knowledge, a capacity for accurate observation and selection of relevant facts and data, a mind unbiased by preconceived ideas, sound judgment, and breadth of vision. We rarely associate such a combination of qualities with our politicians. Special pleading is the enemy of truth. Occasionally, however, even a politician may free himself from the shackles of political expediency, and put the general interest before self-interest, mankind before country, and country before party. To distil the essential wisdom from the heterogeneous ingredients of party controversy requires the courage of statesmanship, the penalty of which is not infrequently loss of office and political oblivion. For office is a party spoil.

These reflections savour of the platitudinous, but they are occasioned by reading the remarkable report (Cmd. 3235; London: H.M. Stationery Office) on his visit to Malaya, Ceylon, and Java, which the Parliamentary Under-Secretary of State for the Colonies, Mr. Ormsby-Gore, has just completed for presentation to Parliament. This is the fourth report of its kind, based on personal visits, for which Mr. Ormsby-Gore has been partly or solely responsible. In 1922 he accompanied his predecessor in office (Mr. Edward Wood, now Lord Irwin) to the West Indies and British Guiana. Two years later, Mr. J. H. Thomas, then Colonial Secretary, made him chairman of the Parliamentary Commission which visited East and Central Africa, and in 1926 he made a tour of the four British Colonies in West Africa. In the course of these tours alone, therefore, he has formed direct personal contact with the most of the dependencies the affairs of which fall within the scope of his ministerial responsibility. His personal acquaintance with the countries of the Empire does not end there, however. Before the War he visited South Africa and Rhodesia, and during the War he served in Egypt, later as intelligence officer in the Arab Bureau, and finally as Assistant Political Officer in Palestine. Probably no other minister has been able to bring to bear upon his task such comprehensive first-hand acquaintance with our non-self-governing dependencies and the mandated territories for which we are responsible.

Had such tours been made solely with the object of obtaining first-hand information for facilitating Mr. Ormsby-Gore's own work at the Colonial

Office, they would have been amply justified. Fortunately, he has a wider conception of his responsibilities. The knowledge he has gained he puts at the disposal of us all. He tells us freely what opinions he has formed, what modifications in policy he would advise. He gives us facts with strict impartiality. He expresses his opinions with no attempt at dexterous ambiguity, and certainly with no air of infallibility. On the contrary, he invites criticism, having first provided us with the necessary knowledge upon which to base it. These are the methods of the research worker, the methods which make for progress. They are certainly the only methods which will ensure that colonial development will proceed on right lines.

In each successive report on British colonies, Mr. Ormsby-Gore has advanced his claim to be considered a research worker, not, it is true, as an original investigator in a specialised branch of science, but in the wide and complex fields of human relationships and the relation of man to his environment. In these four reports on the colonies are set out with admirable clarity, completeness, and in due perspective, the multiplicity of problems confronting our colonial governments, together with what has been done towards their solution and what still remains to be done, what could have been done had our existing knowledge been properly brought to bear upon them, and problems which are likely to make the greatest demands on our research workers. Considered as a comprehensive whole, these reports constitute a great achievement. They can, with sincerity and truth, be described as a monumental and magnificent research.

In the introduction to his report on Malaya, Ceylon, and Java, the occasion of this review, Mr. Ormsby-Gore reminds us that "British possessions in the tropics are at widely different stages of development, but each and all have many problems in common, and each has something to learn from the experience and practice of others." Accordingly, in this, as in previous reports, he concentrates on particular features; for example, the state of agriculture and animal husbandry, public health, education, forestry, and transport, hoping that their study by the comparative method may reveal facts and suggestions which may prove useful to other colonies. A separate chapter is devoted to rubber; first, because it is the principal economic crop of Malaya; and, secondly, to comment on the results of the Stevenson scheme of restriction of output of this commodity. All these subjects possess a special interest for scientific

workers, and in dealing with each of them Mr. Ormsby-Gore lays stress on the contributions which science has made or can be expected to make to the development of the services or industries with which they are related.

Not the least valuable parts of the report are those dealing with geographical, historical, and economic facts relating to the colonies. They cannot fail to interest anyone with the slightest desire for knowledge of conditions of tropical life. They are presented also in such a way as to fix outstanding facts in our minds. British Malaya, we are told, covers a total area a little less than that of England. Its total population is to-day probably about four millions. The Dutch Colony of Java, climatically resembling British Malaya, covering a smaller area, contains a slightly larger population than England, although most of the Javanese (the Handbook of the Netherlands East Indies gives the proportion as more than 70 per cent) are engaged in farming. Practically the whole of Java is under cultivation, whereas the greater part of the Malay peninsula is still virgin forest, and a large proportion of the food supplies for its inhabitants has to be imported. Yet, although the population density of Java is eleven times, and its actual population nearly ten times, that of British Malaya, its overseas trade is less than that of the British colony. For 1926 the imports of British Malaya were valued at £117,000,000, and the overseas exports at £147,000,000, the corresponding figures for Java being £72,000,000 and £131,000,000, all figures being exclusive of bullion and specie. "These remarkable totals [for British Malaya] exceed those of the total external trade of the whole of the rest of the Colonial dependencies put together. The value of exports per head of the population of British Malaya for the last two years has exceeded that of any other country in the world, and is higher even than the figure for New Zealand, which leads the self-governing Dominions in this respect."

Tin and rubber are the two factors determining this result for Malaya. "In 1927 nearly half the world's tin supply was mined in Malaya, and about 70 per cent of the supply of refined tin was shipped from the smelting works in Singapore and Penang." The net export of crude plantation rubber from Malaya in 1927 was 240,000 tons, representing more than 42 per cent of the total exports of rubber-producing countries. Soil fertility is the main factor determining the high population density of Java. The mountain region in Java consists entirely of volcanic rocks which disintegrate

rapidly in the warm, humid climate, and thereby enrich the soil. There are other contributory factors to be taken into account. The pirates of the Straits may have for centuries deflected Indian and Arab traders and settlers from Malaya to Java, while the efficiency of the Dutch colonial scientific and technical services in Java has resulted in vastly increased yields per acre and facilitated population increase. "The island of Java," says Mr. Ormsby-Gore, "affords the most remarkable example in the world to-day of the application of science to the development of the tropics." Obviously, neither piracy nor science can have been of great importance in comparison with the natural fertility of the soil in the determination of Java's high population density. If they had been, we should expect Sumatra to have a much higher density of population than British Malaya, whereas it is only slightly higher.

Nevertheless, what the Dutch have accomplished in Java by the application of science should provide much food for thought for all our colonial governments, and even India. The yield of rice per acre in Java is a little more than double that of British India. Last year (1928) Java expected to produce nearly three million tons of sugar from less than half a million acres of land. Since the establishment of the sugar industry in Java, about the middle of the last century, the yield per acre has been increased sixfold. Java is now the highest sugar producer per acre in the world, and owes its position to the application of plant genetics and soil science. The success of the cinchona (quinine) industry, a virtual monopoly in which is held by Java and Sumatra, has been due almost entirely to very strict scientific controls. The problems presented to the Irrigation Department in Java are some of the most difficult that have ever been presented to hydraulic engineers, Mr. Ormsby-Gore informs us, but they appear to have solved most of them. "As an investment it [the Irrigation Department] has repaid the Dutch East Indies very handsomely, and assuredly it is an outstanding example of the benefits which western science and technical skill can offer." In Buitenzorg, in Java, there are the famous tropical plant research station and a number of other institutions with which more than a hundred scientific workers are associated.

All research for the Dutch East Indies, however, is not centralised in the government research institute at Buitenzorg. The plan of special research institutes, the activities of which are centred in a particular crop, as advocated and put into effect by the Howards in India, has been in existence for

a number of years in Java. "The pivot of the sugar industry in Java is the great sugar research-station at Pasoerean in East Java," the finest of its kind in the tropics. It has been supported entirely by the industry from its inception. Six other separate agricultural research stations, "proof-stations" as they are called, are maintained by the "Algemeen handbouw Syndicaat," or General Planters' Association, entirely by private subscription and voluntary levies. There are a Tea Research Station at Buitenzorg, staffed by nine European scientific workers; a Rubber Research Institute, also at Buitenzorg, also with nine workers; a coffee 'proof' station at Malang in East Java with eight; the Besoeki Proof Station at Djember, East Java, for tobacco, rubber, and coffee, with five Europeans; a quinine station at Tjinjirean, in the Preanger Highlands, West Java; and a small general 'proof' station at Salatiga, near Samarang, Central Java.

Having been given the opportunity to make himself personally acquainted with the work of the Dutch administration and Dutch scientific workers in Java, noting that the greatest advances in the rubber-planting industry have been made by the United States Rubber Plantations and the A.V.R.O.S. Rubber Experimental Station in Sumatra, that Malaya has a handicap of ten years to make up in the scientific study of budgrafting and related problems of the rubber industry, that "the share of Malaya and Ceylon in total world exports of crude plantation rubber has fallen from 70 per cent in 1922 to 52 per cent in 1927, while the Dutch East Indies have increased their share from 25 per cent in 1922 to over 40 per cent in 1927," that "Malaya is behind Java in the use of wireless telegraphy and telephony, and its ordinary telephone system is not nearly so complete or far-reaching," Mr. Ormsby-Gore finds the cause in the British administration services. His attitude is reflected in the following comment on the recruitment of administrative officers for these colonies. "The examination seems still to attract in the main those who have specialised at the University in classics or pure mathematics. In the tropics, especially in tropical areas in process of rapid economic development, sound basic knowledge of natural science, biology as well as physics and chemistry, is of ever-increasing significance. The administrative officer has to fit in and co-operate with a large variety of technical officers, and . . . he should have some idea of the nature of the problems which confront the latter, who often looks upon him as a member of senior and pivotal service."