

## NEWS and VIEWS

## Great Britain and the United States

THE Association of Scientific Workers has, through its Social Relations Committee, recently sent the following message to American men of science: "We British scientists, engineers and technicians organised in the Association of Scientific Workers send our greetings to our colleagues in the United States of America. . . . With the combined might and resources of the U.S.A., the U.S.S.R., China and the British Commonwealth of Nations, ultimate victory is certain. We are nevertheless faced by a powerful and desperate combination of powers. They too have large resources and the advantage of having planned for war many years before actual fighting started. Their scientists have been concerned with the specific problems of warfare and supply for many years longer than we have. We must make up this leeway. But we can do more than that. We, the scientists in the Allied countries, can by pooling our ideas, technical skill and cognate information, play in concert a most vital part in the common effort. . . . We are happy to recall the very close bonds which have united men of science of our two countries in the past. Many of us have personal friends among you. We have worked in your great laboratories; you have worked in ours. This interchange will prove to be most valuable in the present situation. We have as well the terrific advantage of a common language, and, to a large extent, of a common cultural heritage. But we still have a lot to learn from each other and from our Soviet colleagues. By helping each other without stint, we shall help ourselves and we shall be laying the foundations of a truly international scientific commonwealth. American, Soviet and British scientists have the responsibility of preserving the scientific heritage of the whole world against the barbarism and obscurantism of Fascist 'ideology'. We shall do it, and we shall enrich and strengthen it by so doing. Our most sincere and best wishes to you."

## The Empire Bond

YET another sign, if such be needed, of the intangible bond which links together the several members of the British Commonwealth of Nations is provided by the letter printed on p. 21 of this issue, from the honorary secretary of the Australian National Research Council. In this letter, Dr. H. R. Carne offers hospitality in Australian laboratories to scientific workers in Great Britain who are unable to make any direct contribution to the war effort. Not only scientific workers in Great Britain, but also the many students from other parts of the Empire who would normally be proceeding to postgraduate courses or research work in this country but are prevented by present circumstances, are offered an invitation to utilize the universities and research institutes of Australia, to carry on their work. While it is unlikely that many in Great Britain will be able—or will indeed wish—to leave the country at the present time, scientific workers everywhere will appreciate the friendly spirit in which the invitation

has been given, and will wish to thank their Australian colleagues for the very practical form which their concern about the influence of war-time conditions on research has taken. Although the outbreak of war in the Pacific may make it necessary for Australian institutions to modify their offer (Dr. Carne's letter was dated September 19), the fact that it was made by a country already deeply involved in the War is worthy of record.

## Malayan Wild-Life

THE war in Malaya is no doubt interfering with the very interesting wild-life of that region, and the observations that have so long centred upon it. Robinson and Chasen's work on the birds of Malaya describes such interesting items as the breeding habits of the edible-nest swiftlets, the gorgeous sunbirds and the spider-hunters. Malaya has some seven hundred birds including about forty game birds and pigeons. An earlier official publication on the birds of Singapore gives a list of more than a hundred species, including eleven of the sixteen Malayan kingfishers and many interesting doves, hornbills, the vividly coloured little red and orange flower-peckers that haunt the tree-tops, the rollers, the bee-eaters and several swifts. Many species well known in Britain are winter visitors or migrants from northern Asia, including snipe, golden plover, redshank, turnstones, greenshank, and grey plover. The roseate and gull-billed terns are regular birds of Singapore island, the Kentish plover nests on the sandy shores and herons and white egrets fish the marshes. The fishing owl is a very common bird. The "Handbook to British Malaya" states that the fauna of British Malaya is excelled in number of species only in parts of South America. The one-horned Javan rhinoceros is almost extinct, and the common rhinoceros, like the Malayan elephant, has been much persecuted for ivory. The ancient Malayan tapir survives, but the Malayan bison or seladang is almost extinct in certain districts. There are several deer, and the curious serow or goat antelope is in the remoter country. The Malaya tiger is smaller than the Indian, while monkeys and apes include the curious nocturnal slow loris and also oranges, which have often been collected for European zoos. Malaya is the metropolis of the squirrels and there are more than sixty bats, including the great flying fox or keluan with a wing span of nearly five feet, which haunts the coastal mangroves.

As well as the big game hunting, the snipe-shooting and pigeon-shooting are among the best in the world, but collectors have also been attracted to Malaya for fauna and flora. Corbett and Pendlebury's 1934 work on the butterflies of Malaya records more than eight hundred species. There are probably a quarter of a million insects including more than a thousand butterflies in this region, with many of the swallowtail family. There are the famous bird-wing butterflies which often feed with their forewings fluttering and their hindwings kept fairly still. One of the most striking butterflies in the world is Rajah Brook's birdwing, *Papila brookiana*, with a wing

span of 6½ in., which was discovered by Dr. R. A. Wallace in Borneo. The sex ratio is such that the female is about one to every thousand males. The long-tailed blue butterfly of the English list also occurs here, and there are many skippers. There is also the giant atlas moth. Reptiles are not quite so evident as in India and Australia, but crocodiles are numerous, and Russell's viper and other deadly Indian snakes are found here too; also the largest living snake, the king cobra or hamadryad, with a recorded length of 18 ft. 6 in. There are many lizards, turtles and tortoises, including the flying lizard. There are some three hundred fishes in the rivers, including catfish and carp.

The flora of Malaya has been written up by H. N. Ridley, while from a horticultural point of view, the Western world has sent many collectors for its orchids. There are twenty-eight *Vitis* plants, sixteen *Vacciniums* and some seven hundred orchids and wild forms of many Western garden favourites like *Canna orientalis*. There are twenty-one *Dracænes*, thirteen *Carex*, five *Scirpus*, three *Lemna* and the tiny *Waffia*'s microscopic flowers in the ditches and wells. Some plants familiar to British botanists include the common reed *Phragmites communis* on river banks, the chickweed, *Stellaria media*, as a weed of cultivation and the dandelion *Taraxacum Dens-Leonis*, an 'escape' on the Penang Hill. The Malayan flora totals some nine thousand species, and of more than three hundred trees in which the tall *Dipterocarpaceæ* predominate, some half are peculiar to the Peninsula. Lianas, rhododendrons, epiphytes and small palms are characteristic.

#### Television in Colour and Stereoscopic Relief

HITHERTO, television has been confined to flat pictures. In a press demonstration on December 18, Mr. J. L. Baird demonstrated stereoscopic relief in combination with television in colour. Mr. Baird states that his first experiment in this direction was applied to his 600-line two-colour apparatus. The red image was made to 'view' the scene from a slightly different angle from the blue, so that the red and blue images constituted a stereoscopic pair, the receiving screen being viewed through glasses fitted with red and blue filters as in the anaglyph process. This, while simple, had the disadvantage that it was necessary to wear glasses and that, as the colour phenomenon was used to effect the change over from the right to the left eye, neither the colours nor the stereoscopy could ever be properly rendered. So far the object in mind had been to produce a system capable of being transmitted through the existing channels available to the B.B.C., but in an endeavour to produce as perfect a result as possible, it was decided to produce an entirely experimental apparatus regardless of existing practical limitations.

In the apparatus now demonstrated by Mr. Baird, the frame frequency has been increased from 50/sec. to 150/sec., the scanning altered to a field of 100 lines interlaced five times to give a 500-line picture, successive 100-line frames being coloured green, red and blue. At the transmitter a cathode ray tube is

used in conjunction with photo-electric cells, the moving light spot being projected upon the scene transmitted. In front of the projecting lens a mirror device consisting of four mirrors at right angles splits the emerging light beam into two paths separated by a space equal to the separation of the human eye. By means of a revolving shutter the scene is scanned by each beam alternately, so that images corresponding to the right and left eye are transmitted in rapid sequence. Before passing through the shutter disk the light passes through a rotating disk with blue, red and green filters. Thus superimposed red, blue and green pictures blending to give a picture with full natural colours are transmitted for left and right eye alternately. At the receiver the coloured stereoscopic pairs of images are reproduced in sequence and projected upon a field lens, alternate halves of the projecting lens being exposed by means of a rotating shutter, the image of the shutter being projected upon the eye of the viewer so that his left and right eyes are presented alternately with the left and right images, the combined effect being a stereoscopic image in full natural colours.

#### Poverty and Malnutrition in South Africa

EVIDENCE given to the Industrial and Agricultural Requirements Commission by Dr. T. W. B. Osborn on March 17, 1941, has now been published under the title "Remedies for Poverty and Malnutrition in South Africa". (Pp. iii+22. Johannesburg: Central News Agency, Ltd., 1941. 2s. 6d.). Dr. Osborn, pointing out that the mines managements of the Rand have already convinced themselves that it pays to put their native labour force on a well-balanced ration, emphasizes the significance of the prevention of malnutrition in regard to infantile mortality and general physique among the Bantu. The potential production of foodstuffs in South Africa is considered more than sufficient to give each member of the community an ample balanced diet. Distribution is the major problem—getting the right food to the people, by increasing their purchasing power, subsidizing consumption, or free distribution. He criticizes milling practice in the cereal industry and asserts that it is essential that the germ of the wheat should go back into refined flour and mealie meal. The conversion of more skim milk into food for human consumption, development of the margarine industry on the grounds of price, in spite of the butter surplus, encouragement of soya bean growing, of the consumption of meat, fish and peanuts by the poorer sections of the community, and of the use of vegetables and fruit rich in vitamin C, such as guavas and red peppers, are also advocated.

The consumption of these foods so as to eliminate malnutrition should be encouraged within the present economic framework by a system of subsidies, preferably a combination of free distribution, subsidy to the consumer and subsidy to commerce. Dr. Osborn cites for example a scheme to encourage the use of mealie meal containing 5 per cent of soya bean meal, and then discusses the long-term solution of the problem of removing poverty in the midst of