NEWS and VIEWS

Scientific Societies and Post-War Problems

AFTER winning the War of 1914, the Allies lost the peace because of the inability of statesmen and public opinion to understand the dependence of national security on world order and the dependence of world order upon truly workable international relations. After the defeat of Nazism, the mistakes of the last twenty-two years must be avoided by the victorious nations. Hitler has a 'new order' for Europe which is apparently an old-fashioned Roman peace. Aside from the very general Atlantic Charter signed by President Roosevelt and Mr. Churchill, no definite peace plans have been advanced by the Allies, although many groups both in and out of Government circles are working on aspects of the problem. The American Academy of Arts and Sciences is devoting its regular monthly meetings, November until May, to the subject of "Analysis of Post-War Problems and Procedures". The Academy, which has approximately eight hundred members elected from a wide variety of professional fields, includes men who are competent to give considered views on the natural and social sciences and in engineering and affairs; and the meetings are being held on the second Wednesday of the month at its Boston house under the chairmanship of Dr. Harlow Shapley, president of the Academy. On the Monday following, there is a forum directed by leaders chosen to discuss matters raised by the preceding Wednesday evening's speaker.

Prof. A. N. Whitehead, emeritus professor of philosophy at Harvard University, opened the series in November with a paper entitled, "Statesmanship and Specialized Learning"; Samuel Cross, J. Seelye Bixler and Hans Kelsen, also of Harvard, led the forum following this communication. The meeting on December 10 was concerned with problems of communication and transportation in a post-war world. Igor I. Sikorsky, engineering manager of United Aircraft Manufacturing Corporation, spoke "On the Air Transportation of the Future". Walter S. Lemmon, president of the World Wide Broadcasting Foundation, spoke on "Radio as a New Force in the Post-War World". The forum on December 15 was led by Douglas H. Schneider, programme manager of Station WRUL, and Joseph S. Newell, professor of aeronautical structural engineering at the Massachusetts Institute of Technology. The January 14 meeting is being addressed by Zechariah Chafee, jun., Langdell professor of law at Harvard University, on the subject of "International Utopias". Among the topics for later meetings will be considerations of sources and availability of raw materials in a post-war world and discussions as to how the social sciences may best be utilized to implement the ideals of democracy.

Aircraft Defence against Barrage Balloon Cables

PHOTOGRAPHS of German Heinkel III aircraft, shot down recently, reveal the fact that these machines are fitted with a balloon cable fender not very different from designs tried by both sides during the latter part of the War of 1914–18. It consists of a metal rail, V-shaped in plan form, attached to the wing tips with the point of the V carried on a pylon forward of the nose of the machine. Thus, when meeting a cable it is fended off by being slipped round the wing tip. The weight and drag of the device is considerable, and has an appreciable effect upon the performance. British machines now use a row of small cable cutters along the leading edge of the wings. If the cable strikes between the cutters it slips along until it reaches the nearest one. This device is considered to be better, in that it releases the balloon, and clears the way for any following machines. The weight is less than that of the German fenders, although the comparative aerodynamic effects are not certain. The problem of ice formation on either type is likely to be serious, and in this case the British design, placing the cutters in the wing, which is probably already fitted with de-icing devices, is less likely to accumulate serious ice formations than the German exterior structure.

Czech Medical Work in Britain

SHORTLY after the Czechoslovak Government was formed in London, a Department of Public Health was set up under its Ministry of Social Welfare to meet the needs of Czechs in Britain and to prepare for the onerous duties that await them on the liberation of their country. There are about 250 qualified Czech medical men and women in Great Britain. Many are serving with Czechoslovak army units, others are with the merchant navy and some (in co-operation with the Red Cross) are concerned with the welfare of their countrymen resident in Britain. There are clinics and wards in certain hospitals at their disposal and a Czechoslovak Medical Association in Great Britain has been formed to hold regular scientific meetings. Through the Czechoslovak Research Institute, it has just issued the first number of a *Bulletin* in English, to which Lord Horder has contributed the foreword. Lord Horder points out that medicine knows no racial distinctions and recognizes no geographical boundaries. Both nations (Czech and British) are allies and friends opposing the medievalism into which Nazi Germany would thrust all man's endeavours. The paralysis of the advance of medicine which war induces is one of the most serious effects of the crime committed by Germany against civilization, yet Czech medical men are keeping alight the flame of learning and of healing so that, when victory comes, medicine will shine again in the new home they will provide for her.

The *Bulletin* contains several informative articles on current Czech medical work. Before it was overrun by the Nazis, the country had an efficient and well-organized medical service with one practitioner to every 1,500 inhabitants. There were 548 hospitals with 90,000 beds, while all classes of the community could take advantage of the country's unique spa and sanatoria facilities. After the War ends, Czechoslovakia will be in urgent need of medical men, and it is important that Czech medical students now in Britain should complete their studies in readiness for future duties in the homeland, where there is no rising generation of doctors since the Nazis have closed all the medical and scientific faculties of the Universities of Prague and Brno.

New Mexican Observatory

A NEW national observatory which will house a 24–30 in. Schmidt photographic telescope, claimed to be the most powerful in the tropics, is being built in Mexico. Other equipment will include a 12-in. reflector for visual observations and two or three cameras of the Ross type with apertures of 3–5 inches.

The observatory will be situated on a hill ten miles south of the city of Puebla, which is eighty miles east of Mexico City. This is a very favourable location in the southern hemisphere for observation. The latitude of the observatory is 19° N., which means that the sky can be seen to within 19° of the south celestial pole. The site is nearly eight thousand feet above sea-level. The work of the observatory will be closely linked with that of the Harvard College Observatory and of the Mexican Observatory at Tacubaya. It will consist largely of observations of southern variables and of star counts, colours, magnitudes and spectra for the southern hemisphere. The director of the observatory will be Mr. L. E. Erro, assisted by Dr. Carlos Graef, both of whom have already spent a year working at Harvard College Observatory.

Post-War Zoos

THE forty-first Bulletin of the North of England Zoological Society deals with the increasing difficulties facing societies which will have to maintain zoological collections during 1942, and makes a plea for public recognition of the zoological garden on the same standing as the art gallery and museum. The Society's zoo at Chester, like other collections at Dudley and Maidstone, saw a considerable increase in attendance in 1941 compared with the disastrous figures in 1940—Maidstone had about 40 per cent of normal pre-war years—and it is planned to invest money for post-war construction plans. "Not only in this country, but one might say all over the world, the problems of preserving the zoological collections will become more and more difficult as the war progresses from stage to stage" it is noted, adding, "It is very unfortunate that in the past both museums and zoos have suffered from a certain amount of apathy from both the government and the local authorities with the inevitable result that their development has been retarded. Many zoological societies have had to introduce various methods to raise money which most of them would like to have left entirely alone, but the necessity of raising funds left them no alternative. In the post-war period it is likely that art galleries and museums will receive more financial support from government and local authorities, but I am afraid that for some time to come zoological gardens will have to depend upon their pre-war sources of income." Among the post-war zoo ideas are a greater use of open spaces to display the animals to a better advantage, using ditches instead of iron bars and railings, to improve the labelling of exhibits instead of relying upon commercialized guide-books to impart the necessary information to the novice visitor, and more use of zoos by schools with the establishment of zoo lecture halls. The difficulties facing such schemes and how they might be overcome are dealt with.

The Birds of Leicestershire

THE Leicester Literary and Philosophical Society has formed an Ornithological Society for Leicestershire and Rutland, which is compiling a report on past and present field records, to be issued in 1942 as a preliminary to bringing up to date Montagu Browne's 1889 "Fauna of Leicestershire". A meeting in Leicester Museum last September decided to form an Ornithological Society, as a sub-section of the Leicester Literary and Philosophical Society, to meet monthly, Mr. F. Brady being elected chairman and Mr. A. E. Jolley secretary. A duplicated December bulletin, just issued, records the little owl, kestrel, partridge, red-legged partridge and a flight of grey geese within Leicester City bounds, and at the sewage farm a flock of tree sparrows, while a pectoral sandpiper is reported from Northampton Sewage Farm. At a large starling roost at March Covert, near Lockington, the ground was found to be littered with rubber bands believed to have been swallowed by the birds and later either vomited or passed in their excreta. They varied from fruit bottle to tobacco tin bands. Similar instances of this type have been recorded elsewhere with arctic terns, gulls and rooks, and it is probable that the birds mistake them for food, afterwards ejecting them as undigestible. At the flooded Wanlip osier beds, teal, pochard, shoveler and wigeon have been observed among the duck, as well as snipe, curlew and a peregrine. A sheldrake is recorded inland from the River Sence near Kilby Bridge. Although only opened in 1941 the Eye Valley Reservoir has already proved an important bird haunt.

Health of Scotland

ACCORDING to the report recently issued by the Department of Health for Scotland for the eighteen months January 1939 to June 1941, the health of that country in 1939 reached a level never attained before. The severe winter of 1940–41, however, was responsible for the deterioration in the first quarter of 1941 when the infantile mortality rose to 109. In 1939, 7,176 cases of tuberculosis with 3,526 deaths were reported, and in 1940, 7,670 and 4,003 respectively, while in the first half of 1941 the figures were 4,300 and 2,300. With the exception of tuberculosis, the War has so far not had much influence upon infectious diseases, unless the increased incidence of cerebrospinal fever be attributed to war conditions. There was an increase in diphtheria of about 50 per cent in 1940 over 1939, but in 1941 the incidence declined; about 440,000 children of school age and under, or approximately 40 per cent of the child population, have been immunized.

Rotation of the Milky Way

A SUMMARY of the most up-to-date knowledge of the galaxy is provided by an article by Frank K. Edmondson in the *Telescope* of September–October. A short historical outline of the subject is given, commencing with Glydén's discovery in 1871 of the galactic rotation effect in stellar proper motions, and dealing finally with recent research on the constancy of orbital velocity over a range of about 5,000–15,000 parsecs from the galactic centre. The explanation of this constancy in the rotational velocity is that the distribution of stars in the galaxy lies between high concentration towards the centre and uniform distribution. It has been estimated that the number of stars per unit volume near the centre must be a hundred times that in the neighbourhood of the sun. If this is correct, the sky should appear very brilliant in the direction of the galactic centre. As it does not do so, it is believed that huge clouds of dark interstellar matter partially conceal the centre from our view. For this reason the mysteries of that massive nucleus which lies behind the interstellar veil can be penetrated only through the assistance rendered by the study of star motions.