

Problems of this kind called for skilled zoological study. There was also constant need for collaboration, at the planning stage, between agencies jointly responsible for the development of particular communities and between national and international organizations concerned with different facets of development. Examples of joint problems of this kind were the creation of anopheline breeding places by the provision of fish ponds, the activities of rats on Pacific atolls where, by gnawing young coconuts and causing them to fall to the ground, they decreased the copra yield and simultaneously created breeding places for vectors of bancroftian filariasis, and the destruction of roofing thatch by *Herculia* moth caterpillars in consequence of the reduction of parasitic chalcids by anti-malarial DDT sprays. Urbanization created problems calling for close co-operation between entomologists, epidemiologists and engineers. The filariasis research unit recently established by the World Health Organization in Rangoon had as its objective the development of a really effective integrated control methodology. Other problems calling for well-trained zoologists included the relation between nutrition and parasitic diseases, immunological mechanisms and the biology of ageing. Such zoologists should preferably be broadly grounded in natural science and would profit from at least some university acquaintance with such rapidly developing disciplines as molecular biology, radiobiology, insect pathology and insect genetics.

Prof. Calder took for his title "Man and his Fellow Lodgers; a Question of Co-existence". He said that the present annual increase in world population was some 61 million. From the time of Swanscombe Man it had taken the human race 250,000 years to reach its present population size (3,000 million). On present trends it would take 40 years to double it. We were already inescapably committed to a minimum population size of 4,000 million by 1980. To provide a bare subsistence ration for the present annual increment alone would call for 3,400,000 additional cows, cornfields the size of Ireland and five times as many fish as were caught annually along the whole coastline of India. We were not increasing food production as rapidly as that. There was insufficient awareness of the need to conserve our limited natural resources.

At a recent United Nations conference the area of land affected by erosion was put at 1,500 million acres and it was stated that we were at present defiling water to such

an extent that dilution of sewage to the point of safe re-use would require a twelfth of the run-off from the entire land surface. Discharge of combustion products into the atmosphere had increased its content of carbon dioxide by 10 per cent in a century. The 'green house effect' could be expected to increase average mean temperature by 3.6° C in the next 40-50 years. This would radically affect the extent of glaciers and ice-caps with resultant rise in sea- and river-levels and increasing precipitation. The radiostromium now present in the bones of every living child and adolescent had not even existed before 1945. As pressures on food increased, we were more and more strongly impelled to take protective measures against rival organisms. It was, however, imperative that we should avoid doing this at the expense of our allies. We needed biological 'operational research' to assess the risk and study the interrelationships involved. We needed field naturalists at least as badly as cytogeneticists and molecular biologists. The balanced natural economy of the savanna lands, albeit precarious, was in marked contrast to the destructive effect of grazing. Fortunately, recent evidence suggested that, in Africa, the native peoples were more aware of their common interests with their wild-life than some had supposed. Culling of the wild animals, for their own conservation, could and would be a valuable source of protein for human consumption. The International Congress of Zoology in Washington had been historic in its emphasis on the reunification of zoology from its specialities. Of the various sections of the International Biological Programme, of which details were given at the Congress, that relating to the seas seemed, in Prof. Calder's opinion, to foreshadow the most hopeful development of our times. If we could invest this with the glamour of outer space and ascribe to the common interests of mankind the urgencies we give to military programmes, we might recover for biology some of the £2,000 million a year which was going into space research and for the purposes of human well-being some of the £42,000 million spent annually on armaments. Given the knowledge which the Programme could yield and the life-wish which it could generate, we might be able to produce the political headfore to provide for a thousand million extra mouths by 1980.

Concluding the formal part of the session, the chairman directed attention to the need to interest general zoologists in veterinary zoology. A discussion followed.

NEWS and VIEWS

Secretaryship of the Smithsonian Institution:

Dr. S. Dillon Ripley II

DR. S. DILLON RIPLEY II has been appointed secretary of the Smithsonian Institution in succession to Dr. Leonard Carmichael (*Nature*, 169, 952; 1952). Dr. Ripley, who will be the eighth man to serve as secretary of the 117-year-old Smithsonian Institution, is at present director of the Peabody Museum of Natural History at Yale University and professor in the Biology Department at Yale. He was born in New York City in 1913, graduated at St. Paul's School and Yale University and, in 1943, gained a Ph.D. degree at Harvard. Dr. Ripley has served on the staff of the Academy of Natural Sciences of Philadelphia and the American Museum of Natural History in New York and has been a faculty member at Harvard and Yale. In 1942 he served as assistant curator of birds at the Smithsonian Institution. He has participated in zoological expeditions to the South Pacific, south-east Asia, India and Nepal. He is a trustee and member of many scientific and academic institutions and is president of the International Council for Bird Preservation. From 1942 until 1945, Dr. Ripley served under General Donovan

as a civilian with the Office of Strategic Services and was decorated with the Order of the White Elephant Freedom Medal (Thailand). He has held both Fulbright and Guggenheim fellowships and has also served as a Fellow of the National Science Foundation. Dr. Ripley is well known for his research and publications in zoology, especially in ornithology.

Deputy Controller of Guided Weapons, Ministry of Aviation:

Mr. S. F. Follett, C.M.G.

MR. S. F. FOLLETT has been appointed deputy controller of guided weapons in the Ministry of Aviation. Mr. Follett gained honours in engineering at the University of London and was engaged in switchgear research with the Electrical Research Association from 1924 until 1927. He then joined the Electrical Engineering Department of the Royal Aircraft Establishment where he was concerned with various aspects of the application of electrical engineering to the aeronautical field, such as electrical power supply systems for aircraft and engine ignition work. Appointed assistant director of instrument