

THE NATIONAL RESEARCH COUNCIL OF CANADA

A NEW format has been adopted for the forty-fifth annual report of the National Research Council of Canada, covering the year 1961-62, but the report is on the usual lines and includes the annual reports of the Medical Research Council and of Canadian Patents and Development, Ltd.*. During the year, 8.7 million dollars went in support of pure research in the universities, including 975 grants and 675 scholarships and fellowships, as well as a further 3.3 million dollars through the Medical Research Council. The scientific research staff now numbers 733 (including 163 postdoctorate fellows) with 997 technical personnel and 890 general service and administrative staff. A notable development of the year was the Government's decision to give financial assistance to research and development in Canadian industry, and in 1962-63 a special committee of the Council will make awards totalling 1 million dollars in support of long-term applied research in industry. Besides this, the Council is already responsible for wide programmes of objective basic research, as well

* The National Research Council of Canada. Forty-fifth Annual Report for 1961/1962, including the Annual Reports of the Medical Research Council, and Canadian Patents and Development, Ltd. Pp. 47. (N.R.C. No. 6815.) (Ottawa: National Research Council of Canada, 1962.)

as undertaking applied research under contract and operating technical information and documentary services. Support for university science has increasep from 3.6 million dollars in 1957 to 14.4 million dollars in 1962.

Brief summaries are included of the work done in the Division of Applied Biology in the Atlantic Regional Laboratory, Halifax, the Prairie Regional Laboratory, Saskatoon, the Divisions of Applied Chemistry, Pure Chemistry, Applied Physics, Pure Physics, Building Research and Mechanical Engineering, the National Aeronautical Establishment and the Radio and Electrical Engineering Division. Under the Medical Research Council, 96 programmes directed by senior scientists were supported on a three-year basis and 224 on a renewable annual basis, while 64 fellowships, totalling 236,642 dollars were held. Of cases coming to the Canadian Patents and Development, Ltd., during the year, 39 per cent originated in the laboratories of the National Research Council, 47 per cent from other Government agencies and departments and 14 per cent from universities and provincial research institutions. Besides 107 patent applications filed, 150 patents were issued in 13 countries.

PRESERVATION OF WILD LIFE AND ZOOS

IN her book *Orang Utan*¹ Mrs. Harrison describes rearing baby orangs confiscated from poachers in Sarawak and taking them to European zoos. Having learnt something of their needs, she considers the possibility of training them to return to their natural jungle habitat. In a later paper, entitled "First Response to Freedom of Young Orang-Utans at Bako National Park, Sarawak"², she describes the first stages of an experiment in rehabilitation.

In the first three years orang babies are nearly as helpless as human babies; they need a mother-figure as much, and they will endlessly adapt their behaviour to fit the environment the 'parent' provides. The problem is to bring up a baby to a stage when it can cope alone with its jungle environment, without distorting its behaviour so much that it is unable to break free of human society when the time comes. Up to the time of writing the paper the problem had not been solved, and if the experiment is to be successful newly independent females must not only be self-sufficient, but so shy of their former nurses that they will not bring their own babies within easy shot of poachers.

An earlier paper of Mrs. Harrison³ and Dr. T. Harrison's addenda to the book show how vital it is that these experiments should succeed. Simple arithmetic shows that if the present situation remains unchanged the orang-utan has about ten years left. An orang should live thirty or forty years: in zoos their average life is four years, and breeding in captivity is negligible, so to maintain the present world zoo population 60 replacements are required each year. To exhibit a baby costs the life of its

mother, and the mother of another baby who will die in transit. Thus in ten years 2,400 animals are lost from a population which stands at present between two and five thousand and is probably already overweighted with adult males, which do not interest collectors.

It is highly questionable whether the import of orangs, or any other threatened species, should be allowed into civilized countries. There is no justification on scientific grounds because it is now cheaper and easier to transport the biologist to the ape than vice versa. The real irony of the situation is that these orangs acquired at so much cost are then kept in such a way as to make them useless as entertainment or for research. Probably the main function of this book will be to help to teach a basically kind-hearted but uncomprehending public that the sad-eyed hulks of apes in zoos bear no more resemblance to mentally healthy creatures than would a human being maintained in the same way. The clear account of the needs of the baby orang should prevent the demands on the pet market (and ultimately the poachers) which books of this type are apt to produce. (Compare, for example, the assortment of unsuitable felids that were bought as a result of *Born Free*). Orangs are said to be more stupid than chimpanzees, but this impression has arisen because they are expected to behave like the mainly terrestrial and imitative African apes. The orang is arboreal and must have trees to climb; it is an explorer rather than an imitator. Its requirements sound like a zoo director's nightmare. How do you provide thirty years' worth of exploration?—yet they should be considered as