

NEWS and VIEWS

Genetics at Edinburgh: Prof. C. H. Waddington

DR. CONRAD HAL WADDINGTON, formerly of the Department of Zoology, University of Cambridge, has been appointed to the chair of animal genetics in the University of Edinburgh as from January 1, 1947. This chair has been vacant since the end of 1944 when Prof. F. A. E. Crew, its former and first occupant, was transferred to the chair of public health and social medicine. Simultaneously with this announcement comes the intimation that a headquarters of the National Animal Breeding Research Organisation, a creation of the Agricultural Research Council, is being set up in Edinburgh, and that the Genetics Laboratory of this Organisation, which has been occupying temporary accommodation at Hendon, will be transferred to Edinburgh and accommodated in the Institute of Animal Genetics, where it will work alongside the University staff. Prof. Waddington will retain his position as chief geneticist in this Organisation.

Prof. Waddington is a man of many parts. He took his degree at Cambridge in geology; but soon he was displaying his peculiar aptitude as an experimental zoologist by adapting the standard tissue culture technique to the purposes of a very complete investigation of the formation of the embryo. He was successful in showing that the parts of the developing avian and mammalian embryos determine one another's growth just as they were known to do in amphibians. In joint work he studied the chemical nature of the evocator of neural differentiation and the substances which can replace it. For this work he received from the Royal Academy of Belgium the first award of the Albert Brachet Prize given annually for the best published work on embryology. He became a lecturer in zoology at Cambridge in 1932, holding this appointment until 1945 and taking the degree of Sc.D. in 1938. As an illustration of his versatility, it is to be recorded that after taking his degree he held the Arnold Gerstenberg studentship at Cambridge, which is for the encouragement of philosophy among natural scientists. Prof. Waddington later turned to the study of the normal metamorphosis of *Drosophila melanogaster* and the effects on development of many mutant genes, determining in this way and in considerable detail the part played by normal genes in controlling development. During the war years he served with the Coastal Command R.A.F. as scientific adviser to the Commander-in-Chief.

Prof. Waddington's task at Edinburgh will be two-fold. On one hand he will be responsible for the conduct of the research basic to the scientific breeding of farm livestock, that is, for the essential 'objective fundamental' research. On the other, he will lead a University department with all its normal functions; that department will produce geneticists for service either in the National Animal Breeding Research Organisation or elsewhere, and in its research on genetics will be unfettered by any restrictions of application. These changes will mean that the opportunities for genetic research in Edinburgh, both fundamental and applied, will be greatly expanded, and this, taken in conjunction with developments projected under the new Research Organisation in other parts of Great Britain, should ensure the full application of the science of genetics to animal breeding.

Atomic Energy Act: Exemption Order

SECTION 11 of the Atomic Energy Act limits the disclosure of information in the field of atomic energy, and the wording of this 'secrecy clause' is such as to include many types of scientific apparatus, under the heading of "plant", and many types of scientific experiments as "production of atomic energy". In the Parliamentary debate, the Minister of Supply had announced his intention of using his powers of exemption under the Act to make an Order which would release from the prohibition the tools of the nuclear physicist and, so far as possible, their results. This Order has now been made (Statutory Rules and Orders, 1947, No. 100, H.M. Stationery Office, *ld.*). Broadly speaking, it exempts from secrecy any apparatus for the investigation of nuclear reactions, except where the reaction is fission of an element of atomic number greater than 89 and results in a positive energy balance. It also exempts detecting apparatus (such as counters), accelerators (such as cyclotrons) and apparatus for generating charged or uncharged particles (including gamma-rays) by means of nuclear reactions, except by means of chain reactions from fission. The wording of the Order refers to the purpose for which the apparatus is to be operated, and presumably if any such apparatus is designed to be used for producing atomic power, or a weapon, disclosure of the details would remain prohibited except by permission of the Minister. This Exemption Order refers, of course, only to the prohibitions of the Atomic Energy Act, and does not affect the position as regards information obtained from official sources, which remains subject to the Official Secrets Act.

Atomic Energy—Destruction or Construction?

AN instructive series of exhibits has been brought together by the *Daily Express* at the Dorland Hall, Lower Regent Street, London, to demonstrate some of the facts and potentialities of the controlled release of nuclear energy. The exhibition will remain open during February (weekdays, 10.30 a.m.—7 p.m.; Sundays, 2—7 p.m.; admission, 1s.). The first corridor illustrates by models and diagrams the structure of the atom, with particular reference to uranium. Then come models of an alchemist's laboratory and the Cambridge High Tension Laboratory, suggesting the change of technique employed in the sciences, leading to a model of the uranium pile and photographs of American plant built for making fissionable material. A considerable section of the exhibition is devoted to the effects of the first three bombs, centring around a large model of Hiroshima, on which the affected areas are demonstrated, and including photographs and also specimens of material affected by the 'flash'. On the constructive side, a model and diagrams are shown suggesting how atomic piles can be used for the production of power, and some of the uses of artificial radioactive elements are suggested. In the cinema which concludes the tour of the exhibition, selected films are shown of the explosions of the two atomic bombs at Bikini, and portions of a captured Japanese film illustrating the effect of the flash on human beings. It is difficult to say which will produce the more lasting impression: the demonstration of the means of releasing nuclear energy and its peace-time potentialities, or the terrible effects of the atomic bomb. The latter emphasize the desperate need for international co-operation and understanding in this