Dr. D. Küchemann

Dr. Dietrich Küchemann has been promoted to the rank of deputy chief scientific officer and appointed head of the Supersonics Division of the Aerodynamics Department at the Royal Aircraft Establishment. Dr. Küchemann studied under Prandtl at Göttingen where he obtained his doctor's degree in 1936. Remaining in Göttingen for the next ten years he worked at the Aerodynamische Versuchsanstalt under Prof. Betz. During this period he became an acknowledged expert on propulsion aerodynamics and much of his understanding and new thought on those problems was crystallized in the book "Aerodynamics of Propulsion" published in 1953, in which he collaborated with Dr. Weber. In 1946 he came to England and has since worked in the Aerodynamics Department of the Royal Aircraft Establishment where his personal researches were acknowledged in 1954 by his appointment as a senior principal scientific officer on individual merit. While at the Royal Aircraft Establishment Dr. Küchemann has made major contributions to the methods of design of swept wings and the junction of such wings with bodies and nacelles, particularly at transonic speeds. More recently he has worked on problems of wing stalling and flow separations and has been mainly responsible for the important work leading towards an understanding of the vortex type flow around slender wings.

Linnean Society of London : Centenary Celebrations, 1958

The Linnean Society of London is arranging to celebrate in 1958 the 200th anniversary of the publication of the tenth edition of the "Systema Naturae" of Linnaeus, and the centenary of the joint communication made to the Society by Darwin and Wallace on evolution by natural selection. A memorial tablet will be unveiled on July 1 in the rooms of the Society commemorating the reading of the Darwin–Wallace communication. This will be followed by a dinner of the Society. A special meeting of the Society will be held in the Memorial Hall of the Royal Geographical Society, Kensington Gore, on July 15, at which two papers will be read on the work of Linnaeus by Dr. A. Tindell Hopwood and Dr. A. J. Cain. These will be followed by a presentation of Darwin–Wallace Silver Medals to a number of British and foreign zoologists and botanists. A joint conversazione with the Royal Society and the Geological Society will be held at Burlington House on the evening of July 15, at which Darwiniana and Wallaciana will be exhibited. A Darwin–Wallace memorial number of the *Journals of Botany* and *Zoology* is to be published containing the text of Dr. Julian Huxley's Darwin–Wallace Lecture which will be delivered in the Royal Albert Hall at the opening session of the International Congress of Zoology on July 16, together with some fifteen original contributions from distinguished botanists and zoologists working in the field of evolution. Bronze replicas of the Silver Darwin–Wallace Medals (in case) will also be available for purchase.

The Convergatron

At a meeting of the American Nuclear Society, on October 29, Dr. Lyle B. Borst, chairman of the Department of Physics, College of Engineering, New York University, described a new design for nuclear power plants. Dr. Borst envisaged a subcritical reactor controlled by a small neutron source and amplified by a 'convergatron'. This is a neutron amplifier which magnifies the flow of neutrons in a manner analogous to that of the thermionic valve and the transistor. A series of convergatrons would amplify neutrons from a weak source to a large power reactor, and yet the power plant itself would shut off upon the removal of the source. Because all parts are subcritical, there is no danger of losing control of the chain reaction.

The convergatron consists of three sections—one containing the pure neutron moderator such as plain water or graphite, one containing unenriched uranium-238, and a thermal neutron barrier such as cadmium. Fast neutrons from the fission of uranium in the fuel zone penetrate the cadmium barrier. They are slowed by the moderator to become thermal neutrons that activate the next fuel zone. The fast neutrons starting in the reverse direction are slowed by the moderator until they can no longer penetrate the cadmium. Each fuel zone receives neutrons from the preceding stage. Therefore each succeeding stage can operate at a higher power while still depending upon the preceding stage for its excitation. With several stages, the convergatron, acting as a power source through heat transfer, should be able to generate enough power to make the system practicable in many areas of the world.

Nuclear Power Stations and Public Health Hazards

Several questions about nuclear power stations were dealt with in the House of Commons on November 11 by Mr. D. L. M. Renton, who repeated that if public confidence were shaken at all by what happened at Windscale (see this issue of *Nature*, p. 1093), so far as Calder Hall and the Electricity Authority's nuclear power stations are concerned, confidence should be completely restored by the White Paper and the Prime Minister's statement. As regards the suggestion of an independent inspectorate, the Atomic Energy Authority has prepared safety regulations for Broadwell power station and a permanent safety staff is already drawing up a formal safety code of procedure for both the design and the operation of nuclear reactors. The suggestion of a public monitoring system would receive consideration. A public inquiry will be held into the proposal to build a nuclear power station within the Snowdonia National Park ; but in reply to the suggestion of a full inquiry into the whole question of the siting of nuclear power stations instead of dealing with them individually, Mr. Renton thought that individual inquiries as required were the best way of dealing with the matter.

Afterwards, on November 12, replying to a question whether he would consider setting up a special department within the Factory Inspectorate to select and train inspectors for the nuclear power stations, the Parliamentary Secretary to the Minister of Labour, Mr. L. R. Carr, said that this is not considered necessary. Four inspectors in the Chemical and Engineering Branch and twenty-one in the districts have already been trained, and fifty more are to be trained under a programme covering protection against radiation hazards in industry generally, including nuclear power stations. Two inspectors in the Chemical and Engineering Branch have also received training in the design, maintenance and operation of reactors.

Progress in the Commercial Use of Atomic Energy

The Paymaster-General, Mr. R. Maudling, replying to a question on November 11 in the House of