

Breeding from the Cambridge Botany School alone. Other botany departments continue to make similar contributions at all grades to the research staffs of institutes and teaching organizations throughout agriculture, horticulture, forestry and fisheries. It is not that botany is dead, but that the grossest ignorance prevails in the general public and even in scientific circles of what modern botany is like and what its achievements have been. Nor, of course, is it appreciated how greatly the subject has been modernized or the extent to which, both in teaching and research, botany courses regularly involve the most sophisticated physicochemical and mathematical techniques. This can be appreciated only by visiting laboratories and lecture rooms to see modern courses in full swing (and few opinions are based on such visits), but it can also easily be seen by examining the leading journals of botany, such as the *American Journal of Botany*, the *New Phytologist* or the *Annals of Botany*. It is at once apparent that most of their papers have a strongly experimental and quantitative approach and reflect the manner in which botanists today have adopted physicochemical and mathematical techniques, and clearly base their approach on discovery and evaluation of the causative mechanisms and processes involved in plant life.

The old mainspring of the subject, the elucidation of conjectural evolutionary origins by comparative studies of anatomy and life histories is now taught at more reasonable length, and in every area of research, even including taxonomy, modern experimental methods are making strong headway. Furthermore, although botanical journals reflect the fact that botanists are sharing in the advances of molecular biology at the biochemical and biophysical level, there is a large and growing interest in the biology of the whole organism, and of the whole organism in relation to its environment. The importance of this approach for the applied biological sciences, such as agriculture, horticulture, forestry and fisheries, needs little emphasis, but the realization of it is shown by such things as the successful inauguration of the new *Journal of Applied Ecology*, following the *Journal of Animal Ecology* and the *Journal of Ecology* by the British Ecological Society. It is equally apparent throughout the whole of the current International Biological Programme.

So long as one believes that the study of the whole organism is bound to have an increasing role in the future, one is committed, I believe, to the maintenance of the long established departments of botany and zoology, where the integration of many fields of research has long taken place around the whole plant and the whole organism. There are such tremendous repositories of important scientific information within the areas of these two old established subjects that there would be irretrievable loss in merging them into new schools of biology exploiting for the moment nothing but the most fashionable new approaches. It is impossible to forecast where in animal or plant biology the next breakthrough will occur and from what branch of inquiry, probably long dormant, growth will be stimulated by some new technique, new evidence or new mode of thought. Without the maintenance of the libraries, museums and, above all, the synthesizing courses centred on the whole plant or the whole animal, it would be difficult, if not impossible, for these new advances to arise, nor without an approach of this breadth will new generations be given awareness of the whole biological environment in relation to the life of man.

Yours faithfully,

H. GODWIN

Botany School,
Cambridge.

This letter refers to two articles in the November 9 issue of *Nature*, one on page 521 and one on page 541.—Editor, *Nature*.

Monod at Edinburgh

SIR,—Your correspondent, reporting on Professor Monod's address at Edinburgh in your issue of November 23 (*Nature*, 220, 744; 1968), produces, or repeats, a misquotation when he refers to my old definition of molecular biology as follows: "quoting Chargaff's 'chemistry without a licence'—". Lest this inferior version gain currency, may I quote what the "Old Chemist" really said in the dialogue *Amphisbaena* (Essays on Nucleic Acids, p. 176): "My definition, incidentally, would be that molecular biology is essentially the practice of biochemistry without a licence."

Yours faithfully,

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University News

Dr F. Glockling has been appointed to the chair of inorganic chemistry at the **Queen's University of Belfast**.

Dr P. L. Marsden has been awarded a personal professorship in the Department of Physics at the **University of Leeds**.

Professor L. Brent, Southampton, has been appointed to the Pfizer chair of immunology tenable at **St Mary's Hospital Medical School, London**.

Appointments

Mr W. A. Cumming has been appointed director of the Radio and Electrical Engineering Division of the **National Research Council of Canada**. **Dr A. E. Douglas** has been appointed director of the council's Division of Applied Physics.

Announcements

The following medals have been awarded by the **Royal Society**: the **Copley Medal** to **Professor T. Reichstein**, formerly of the University of Basle, for his work on the chemistry of vitamin C and his studies of the corticosteroids; the **Rumford Medal** to **Professor D. Gabor**, Imperial College of Science and Technology and CBS Laboratories, Stanford, for his contributions to optics, especially by establishing the principles of holography; the **Davy Medal** to **Dr J. W. Cornforth**, Milstead Laboratory of Chemical Enzymology, and to **Professor J. G. Popják**, University of California, for their work on the elucidation of the biosynthetic pathway to polyisoprenoids and steroids; the **Darwin Medal** to **Sir Maurice Yonge**, University of Glasgow, for his contributions to evolutionary biology, particularly of the Mollusca; the **Hughes Medal** to **Professor F. J. Dyson**, Institute for Advanced Study, Princeton, for his work in theoretical physics, especially on quantum electrodynamics.

A Cooperative Institute for Research in Environmental Sciences has been established on the Boulder campus of the University of Colorado to promote research and teaching in these sciences, and to serve as a centre for multi-disciplinary collaboration between research workers from Boulder and the rest of the world. A visiting fellowship programme provides funds to enable scientists working in the fields of solid-earth geophysics, oceanography, radio propagation, upper and lower atmosphere physics and solar terrestrial relationships to spend a year with CIRES. Further information can be obtained from the Cooperative Institute for Research in Environmental Sciences, University of Colorado, Boulder, Colorado 80302, USA.