

Correspondence

Why so Long Delayed ?

SIR,—A recent article in *Nature* calls for reply. It is important to distinguish between expeditions which aim at mainly qualitative results and which bring back, in effect, reference collections from the areas visited, and expeditions whose aim is to obtain the seasonal and spatial sampling of an area necessary for ecological and biogeographical studies. Such expeditions are by their nature long term and to a large extent employ their own staff both for collecting and for working up their material. Both kinds of expeditions possess abundant material of great value to systematists and biogeographers which is made available to outside specialists when required. Requests of this kind for Discovery material are still received at a rate of two or three each year and the National Institute of Oceanography could boast justifiably of possessing such a collection.

The "qualitative" kind of expedition, being dependent on the availability of systematists, does not and cannot expect to get reports on every group published rapidly, while the speed with which the "quantitative" kind of expedition gets out reports is more dependent on how long it takes to achieve satisfactory coverage of its area in space and time. None the less, "delayed" systematic results are still of great value, reviewing as they do a collection in the light of the most up to date information available at the time of going to press.

For all oceanographic biological collections, the very nature of the material collected is cause for delay; each sample consists of a mixture of numerous diverse organisms which must be sorted into component taxa before being passed to systematists or ecologists for further analysis, and the proper analysis of the frequently very abundant material is inevitably a long process.

Despite these considerable difficulties in sorting and working up collections, has the performance been, in general, as bad as your article suggests ?

The Challenger returned to England in 1876 and the first volume of reports appeared in 1880. The last, apart from the *Summary of Results* (1895), appeared in 1889. Anyone who looks at these reports must be amazed not that they took so long to produce but that such an immense task could be accomplished so quickly. If there are new Challenger reports still appearing as your article affirms, I seemed to have missed seeing them.

The Discovery expedition consisted of a series of mainly Antarctic voyages between 1925 and 1951 (excepting the ten years 1939–49 when a war and its after-effects intervened). The first voyage ended in October 1927 and the first Discovery report appeared in January 1929; the first volume was completed in December of the same year; by 1949, when the expedition was absorbed into the National Institute of Oceanography, 129 reports in twenty-five volumes had been published and a further fifty-one reports have since appeared. The *Discovery Reports* are for the publication of the results of the Discovery Committee's work and researches arising from it, including, for example, the larger papers of the institute's Whale Research Unit and systematic papers on some remaining, mainly smaller, groups from the collection. The biological work of the National Institute of Oceanography other than that of the Whale Research Unit has not been concerned with the Antarctic for a

number of years and appears in a variety of other publications.

Your article offers the suggestion that expeditions should now restrict collecting and concentrate on working up the material they already have. As, to the best of my knowledge, the Challenger, Dana and Atlantide ceased collecting in 1876, 1929 and 1946 respectively, there remains only "Discovery" of the expeditions mentioned to which this suggestion can refer. The present RRS Discovery makes, on average, one biological cruise each year, not it is true to make "General Collections"¹ but to carry out programmes of sampling planned to investigate specific, mainly ecological, problems with the aid of the increasingly accurate sampling techniques devised by cooperation between engineers, applied physicists and biologists working together at the National Institute.

Nor have the problems of sorting and analysis been neglected; the material from last year's cruise (January–April 1968) was sorted by the end of August and reports on some of it are ready for press; any subsequent delays can hardly be held to be the fault of the marine biologists.

Yours faithfully,
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¹ David, P. M., "Pelagic Organisms in the Superficial Layers", in *Symposium on Antarctic Oceanography*, Santiago, 1966, 24–29 (Cambridge, Scott Polar Research Institute, 1968).

SIR,—An article in *Nature* maintains that marine biologists are slow in publishing their results, and that they ought to find a quicker way of producing their papers. As a marine biologist, I turn to *Nature* for some advice.

Separating biogeographers and ecologists from taxonomists is a difficult task because they are often one person. Almost all taxonomists are interested in biogeography, and most of them in ecology as well. Conversely, an ecologist who does not base his work on careful taxonomic work should never be allowed to publish. Hence, it has become customary for biogeographers and ecologists to wait until their material has become properly identified—which takes a long time. Perhaps *Nature* can say how this difficulty may be overcome ?

It is true that marine biologists and archaeologists behave similarly when on expeditions. They both have the same bad habit of taking advantage of every bit of evidence found, knowing that otherwise the information gained may not be found at all. When, on board the Galathea, I came across ten specimens of a patelloid appearance which later turned out to be *Neopilina*, I should perhaps have thrown them overboard because at that time we had no specialist ready to take over the treatment of the Deep Sea prosobranchs to which they apparently belonged. We ought perhaps to have restricted ourselves to taking back specimens of those well defined groups on which specialists were eagerly awaiting new material. I am sure that *Nature* can tell us what we should have done if some of these specialists had died in the meantime and their successors wanted material of neighbouring groups instead ? And where I should have got the money from for a new expedition when—some day—I decided to detect *Neopilina* ?

Finally, may I seek *Nature's* assistance in solving another recent problem of mine ? Recently I received from the Indian Ocean Centre their material on pelagic nudibranchs collected as follows: one sample in 1960, thirteen in 1962, forty in 1963, thirty-nine in 1964 and fourteen in 1965. The sorting could hardly have been performed more quickly, but my problem is how much of it is already out of date ? If I concentrate on this (which I cannot do because of my other work) it will take at least a year to examine the samples, write out particulars,

arrange tables, produce illustrations and, finally, to write the manuscript. Then comes a delay of up to two years before printing and distribution have taken place, and by that time (in 1972 at the earliest) all the material is more than five years old. Maybe the whole study is not worth while—or is it?

Yours faithfully,

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Editor's Note—Both these letters refer to an article in *Nature* (220, 855; 1968).

University News

Professor W. Mackay has been appointed to the chair of haematology at **King's College Hospital Medical School, London**. The title of professor of clinical pharmacology has been conferred on **Dr C. T. Dollery, Royal Postgraduate Medical School**, and the title of professor of optical design has been conferred on **Dr C. G. Wynne, Imperial College of Science and Technology**.

Dr R. F. Baddour has been appointed head of the Department of Chemical Engineering at the **Massachusetts Institute of Technology**.

Dr M. S. Laverack has been appointed to the chair of marine biology, Gatty Marine Laboratory, **University of St Andrews**.

Dr T. T. Sandel has been appointed chairman of the Department of Psychology, **University of Washington**.

Announcements

The following were elected fellows of the Royal Society on March 20: **Professor H. B. Barlow**, professor of physiological optics, School of Optometry, the University of California; **Professor R. L. F. Boyd**, professor of physics and director of the Mullard Space Science Research Laboratory, University College, London; **Dr J. H. Chesters**, deputy director of research, Midland Group, British Steel Corporation, Swinden Laboratories, Rotherham; **Dr A. H. Cook**, deputy chief scientific officer, superintendent of the Standards Division, National Physical Laboratory; **Dr G. W. Cooke**, deputy director and head of the Chemistry Department, Rothamsted Experimental Station, Harpenden, Hertfordshire; **Professor P. V. Danckwerts**, Shell professor of chemical engineering, Department of Chemical Engineering, University of Cambridge; **Dr P. Fatt**, reader in biophysics, University College, London; **Professor J. R. S. Fincham**, professor of genetics, University of Leeds; **Dr H. M. Finnieston**, deputy chairman (technical), British Steel Corporation, London; **Professor W. S. Fyfe**, Royal Society research professor, Department of Geology, University of Manchester; **Professor W. R. S. Garton**, professor of spectroscopy, Imperial College of Science and Technology, London; **Professor P. G. H. Gell**, professor of immunological pathology, Medical School, University of Birmingham; **Professor Q. H. Gibson**, professor of biochemistry and molecular biology, Cornell University; **Dr E. Glueckauf**, deputy chief scientist and head of the Radiochemistry Branch, Chemistry Division, AERE, Harwell; **Earl of Halsbury**, director of the Distillers Co., Ltd, Head Wrightson and Co., Ltd, and Joseph Lucas (Industries), Ltd, London; **Dr B. A. Hems**, managing director, Glaxo Research, Ltd, Greenford, Middlesex; **Dr G. A. Horridge**, reader in zoology and director of the Gatty Marine Laboratory, University of St Andrew's; **Dr R. R. Jamison**, chief engineer (research), Rolls Royce, Ltd, Bristol Engine Division; **Dr A. Klug**, MRC Laboratory of Molecular

Biology, Cambridge; **Dr L. W. Mapson**, deputy chief scientific officer, Plant Division, ARC Food Research Institute, Norwich; **Professor A. W. Merrison**, professor of experimental physics, University of Liverpool, and director of the SRC Daresbury Nuclear Physics Laboratory, Warrington, Lancashire; **Professor C. W. Oatley**, professor of electrical engineering, Department of Engineering, University of Cambridge; **Mr T. A. L. Paton**, senior partner, Sir Alexander Gibb and Partners, London; **Professor W. S. Peart**, professor of medicine, St Mary's Hospital Medical School, University of London; **Dr H. C. Pereira**, recently director of the ARC of Central Africa in Rhodesia, Zambia and Malawi, director-designate, East Malling Research Station, Maidstone, Kent; **Dr L. A. B. Pilkington**, director of Pilkington Brothers, Ltd, head of the Technical Function, St Helens, Lancashire, and chairman of Fibreglass, Ltd, London; **Professor C. T. C. Wall**, professor of pure mathematics, University of Liverpool; **Dr A. Walsh**, assistant chief, Division of Chemical Physics, CSIRO, Melbourne; **Professor P. F. Wareing**, professor of botany, University College of Wales, Aberystwyth; **Professor W. M. Watkins**, head of the Department of Biochemistry, Lister Institute of Preventive Medicine, London, and professor of biochemistry in the University of London; **Professor K. Wiesner**, research professor of organic chemistry, University of New Brunswick; **Dr J. H. Wilkinson**, deputy chief scientific officer, Mathematics Division, National Physical Laboratory.

The **University of Bristol** has appointed Professor A. W. Merrison as vice-chancellor from the beginning of the next academic year. Professor Merrison is 45, and has taught physics at the University of Liverpool since 1951. Since 1962 he has also been the director of the Daresbury



Professor A. W. Merrison.

Nuclear Physics Laboratory. In the past few months he was often mentioned as a possible director of the project to build a 300 GeV proton accelerator under the CERN umbrella, chiefly because of the smoothness with which the Daresbury laboratory was completed.

ERRATUM. In the review by Frank McCapra of the book "Luminescence in Chemistry" (*Nature*, 221, 884; 1969) the last sentence of the penultimate paragraph should have read "The author's guesses about the reactions involved reinforce the plea for contributions from chemists to this difficult but potentially rewarding field".

ERRATUM. The title of the article by Sushil Kumar *et al.* (*Nature*, 221, 823; 1969) was altered without consulting the authors, with resultant loss of clarity. The original title read "Orientation and Control of Transcriptional Units containing Cistrons N_{cIII} , β , *exo* and *int* in *E. coli* Phage λ ".