

Natural History Museum (cont'd)

SIR—In a recent News article (*Nature* 345, 4; 1990), it is implied that the new plan at the British Natural History Museum (NHM) to abolish tenure and emphasize short-term appointments finds a model in practices at the American Museum of Natural History. This is inaccurate. Here we hold to a programme of permanent appointment for curators, scientific assistants and technicians. This programme is complemented by support for graduate and postgraduate fellows. The fellowship programme — which hardly fits one's idea of 'short-term contract work' — was anchored from new sources of funding. No curators were dismissed as redundant in order to provide for fellowships. In lacing together the activities of permanent staff with that of postdocs and graduates, we are like the major research-orientated universities of the world. In fact, we have formal agreements for graduate training with Columbia University, Cornell University and City University of New York. These important institutions recognize that we can provide a dimension of science training that even the strongest university programmes cannot duplicate.

Museums should, of course, strive to provide leadership in science, to open outward to the public, and to forge educational links with universities. New directions should, however, build on strengths of programmes already established. It is a bitter irony that at the very time when

there is a renaissance in the field of systematics, and growing concern for the loss of biodiversity, we are confronted with funding constraints and proposals for the NHM that threaten one of the great centres for systematic research.

The NHM is one of a few institutions that can claim to provide a formidable sampling of the vast richness of life on this planet. Its collections and its curators belong to the world, not just to London or the British Isles. Centres with appellations such as 'biodiversity' and 'living resources' — programmes now planned for the NHM — are sprouting up all over the place. There is, however, no other bird collection like that at the British Natural History Museum. As an educational and public institution, a museum is most credible if it maintains vital research programmes that are actually relevant to the priceless repository that it protects and displays.

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SIR—What I read of the fate of the British Natural History Museum is astonishing. How can we imagine the demise of most activities in systematics in an institution — the reference institution — devoted to natural history? How can it be possible to think of a proper curating of collections

that constitute a world heritage without competent scientists? What is the rationale in separating curator activities and research activities? I read (*Nature* 345, 191; 1990) that the "basic problem is money". An uneducated attitude is to think that money for natural history is a waste of money. Who will believe that there is less money in the United Kingdom today than 20 years ago?

The director says (*Nature* 345, 198; 1990) that "the only way is for our museums to be selective". It is easy to see that this kind of selection may be the beginning of the end, particularly when this selection applies to "taxonomic research" in non-taxonomic areas such as "environmental quality, mineral resources [and] human health".

Behind the new magic word "biodiversity", as an example, I see the demise of the fossil mammal section, where excellent research is done. To suppress natural history research in the Natural History Museum is like a story by Lewis Carroll. A pure nonsense.

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SIR—The news of the latest changes at the Natural History Museum (NHM) in London is sad and depressing for every biologist. The proposed changes are particularly distressing in an institution of such great international importance, and would undermine research in the entire field of systematic biology.

These changes, so deleterious for the future of comparative neo- and palaeobiology, are being introduced at a time when the 23rd General Assembly of the International Union of Biological Sciences (IUBS) has appealed to the international community of biologists to create conditions that will enhance the further growth of taxonomy. The union has promoted as one of its current research programmes studies on biodiversity in the context of ecosystem structure and stability. I would expect from responsible authorities a better understanding of the role of the NHM, serving the international biological community and shaping the progress of research on biological diversity on a global scale. I trust that solutions can be found to permit continuation of the present scope of research at the NHM, preserving its magnificent scientific heritage, both national and international.

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Heisenberg's principles

SIR—Mark Walker, in his book *German National Socialism and the Quest for Nuclear Power 1939–1945* (reviewed by John L. Heilbron in *Nature* 343, 421; 1990) draws strange and convoluted inferences from events cited out of context and from documents that are described but seldom quoted. Heisenberg's private conversation with the Dutch physicist Heindrik Casimir, for example, is interpreted as somehow extending to, and alienating, all Heisenberg's Dutch colleagues. Heisenberg's lectures on physics at German cultural institutes are construed as full support of the German war effort, as "helping Germany win the war . . .". It is interesting to note that it has recently been revealed that there was a spy in Heisenberg's circle, probably Karl-Friedrich Bonhoeffer, who reported to publisher's representative Paul Rosbaud in his *alter ego* as a British agent.

Heilbron, in his review, describes some German scientists as "tainted", and Heisenberg as "travelling up and down the occupied territories as an ambassador of German culture, justifying the ruthless-

ness of German administration. . .". What Heisenberg was actually doing was lecturing on physics, getting confiscated equipment returned to physicists in occupied countries, and aiding his colleagues in other ways.

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How synthetic?

SIR—The notion of 'synthetics' in the context of the economic growth/no-growth debate can at times be misleading.

You write, for instance (*Nature* 344, 179; 1990), that "Some natural resources have gone for good, but have been used in part to generate the skill with which they can be replaced, naturally or by synthetics".

Nowadays, the most widely used synthetics are derived from petroleum, which is itself in shorter supply on this planet than the iron which the synthesis usually replace.

Ceramics would be a better bet, if they can be made more versatile.

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