

## Cuts at British Museum (NH)

SIR—In 1939, a proposal by the trustees of the British Museum (Natural History) to move the best ornithological collection in the world from the famous Bird Room at South Kensington to an outlying branch at Tring caused a major outcry, for reasons summarized by one of the former 'super-numerary staff' who had worked there for 30 years, the late Dr D.A. Bannerman, who wrote<sup>1</sup> "The study collections, which are visited and consulted by ornithologists of every nation, would automatically lose half their value through their inaccessibility . . . the contemplated move of the Bird Room from London will be greeted with dismay by 90 per cent of those with whom my work has brought me into contact".

The project was suspended for 30 years, until most of those who had objected were dead, but was then reintroduced so unobtrusively that local and international protests<sup>2,3</sup> came too late to stop it. There was excessive delay over the move<sup>4,5</sup>, which helped to discourage the remaining outside workers, by now treated by the growing professional staff as rather a nuisance, if not rivals, from undertaking the difficult journey to Tring, where there is now a shortage of local accommodation which has become very expensive. A large part of the egg collection was soon stolen over a period unnoticed, and the rest shuffled around<sup>6</sup>, since when increasing restraints have been placed upon visitors, who are no longer encouraged to assist with work on the collections.

The move to Tring might have been tolerable if what, in defiance of the informal tradition of the Bird Room, was renamed the 'Subdepartment of Ornithology' had continued to flourish, but it was one of the unspoken objections to the move that if the collections were exiled from the main museum, they might suffer disproportionately compared with other departments in hard times. Since 1980, four more or less distinguished and influential senior staff who retired have not been replaced, another is due to leave shortly, and it is said that the last two may soon be declared redundant as part of a general decision to abandon research on (of all things) cetaceans, birds, arachnids and coelenterates, leaving only three junior curators in the subdepartment to deal with the endless stream of enquiries from the public and to welcome distinguished foreign visitors.

This means the virtual end of organized research on bird systematics in Britain at a time of its explosive development as the result of the introduction of a variety of new ideas and techniques throughout the world, in which the staff of the subdepartment were beginning to play a more active role<sup>7</sup>. In consequence of the default

of the past management, the authors of the current vast authoritative handbook on the birds of the western Palearctic, edited in Britain<sup>8</sup>, have already had to go abroad for their systematics, which were provided for their predecessors through the private enterprise of a former Lord Rothschild from the same museum at Tring. It seems time that the current performance behind the turnstiles and show-cases of this national institution turned scientific Disneyland in relation to its past traditions and promises received more public scrutiny.

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1. *Ibis* **82**, 183–185, 382–385, 575–577 (1940).
2. Allason, J. *The Times* 30 January 1969.
3. *Nature* **221**, 1094, 1197; **222**, 605–606; **223**, 430 (1969).
4. *Nature* **239**, 118 (1972).
5. *Br. Birds* **65**, 492 (1972).
6. *The Times* 1 May 1980.
7. Knox, A. *Br. Birds* **81**, 206–211 (1988).
8. Cramp, S. et al. (eds) *Handbook of the Birds of Europe, the Middle East and North Africa* (Oxford University Press, 1977 on, 5 vols, continuing).

SIR—The curatorial staff of the American Museum of Natural History view with alarm the effects of recent cutbacks of programme and staff at the British Museum (Natural History). The latest decisions, relegating the programmes in coelenterates, arachnids and birds to a "care and maintenance mode", has eliminated research personnel in these areas, leaving these collections of inestimable scientific worth in the care of technicians who may not, in all cases, be professionally trained biologists.

What is at stake here is nothing short of mankind's understanding of the current diversity of life. In recent years, budgeting and funding priorities, in conjunction with basic trends in biological research generally, have seen a steady concentration of high-calibre research in systematic biology increasingly in large private or government-sponsored natural history museums. As erosion of collection support and collection-based research has continued at universities, museums have struggled to take up the slack. And while systematics is vigorously pursued at relatively fewer kinds of institutions, it is also true that the intensity and calibre of such research has never been higher since the days of Linnaeus. Prominent among those institutions with the very highest quality of systematics research has been the BM(NH).

Paradoxically, while support of even our finer research institutions in systematics continues to be threatened, the public at large has seldom if ever been more aware of the need for a deep under-

standing of the diversity and connectedness of the living biota. The collections at the BM(NH), the fruits of worldwide scientific collecting for well over a hundred years, constitute one of a handful of records of the state of the living world as it is — and was — just at the onset of the current wave of ecosystem and species loss that is now taking place. Simply put, such collections are irreplaceable.

Biological collections such as those of the BM(NH) are not sentimental memorabilia of a bygone era of empire and exploration. They are our only concrete source of information about a living world that is fast disappearing. It is no extravagant luxury to maintain them — and to do so properly, under the aegis of a highly skilled and thoroughly dedicated research staff. It is, instead, a vital necessity. We urge the administrative powers that be to reconsider their decisions, and other similar plans that may be in the offing. And we urge the British public to consider whether the relatively modest sums to be saved are worth the sacrifice in commitment to preserving one of the finest sources of information about the living world.

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## India and China

SIR—Contrary to the comments you published earlier (*Nature* **331**, 384; 1988), specific comparisons would reveal that India has indeed surpassed China in most fields.

The Chinese revolution stopped some three decades back, mostly through the redistribution of wealth, to provide a bowl of food, shelter and basic education, to its population at large. That too was accompanied by 50 million or more dead and mass persecutions by Chinese authorities, in contrast with the stone-age liberty that has hampered the development of what is needed most in India — a sense of national identity.

In fact, economic development was just not possible under Mao, who frowned on the notion of profit and distrusted the intellectual community to the extent that professional training all but stopped after the 1960s cultural revolution. The existence of revolutionary cadres placed by Mao at all levels of party hierarchy is one of the most difficult political obstacles for the current leadership in changing Chinese society.

The history of development is actually less than a decade old since China adopted the so-called open-door policy. Chinese in Beijing are fond of boasting about something as simple as the first luxury hotel being constructed by purely indigenous

expertise, since the international chains came up only during the past five years by massive transfers of foreign technology. Ancient equipment now lies side-by-side with the most recent acquisitions in laboratories, thanks to foreign generosity. Given the lack of adequate infrastructure for public utilities, ordnance factories had to manufacture simple appliances such as washing machines and fans to give at least a taste of comfort to less than 6 per cent of the population.

The manufacture of high-technology items such as computers and nuclear power plants still awaits adequate agreements with foreign collaborators, whereas they are taken for granted in India.

In order to replace the Soviet Union as the bastion of world communism, Mao spent enough of the gross national product to create one of the largest but most backward armies in the world. Whereas the Chinese military is struggling to modernize 30-year-old Soviet models, some of the latest versions are manufactured in India, even though defence spending under Nehru was low enough to account for India's reversals in border conflicts.

China has long replaced India as a model for developing countries in western thinking, given all its anti-Soviet rhetoric, and its close defence and economic ties with the United States.

Unfortunately, democratic institutions in India provide enough dissent to verge on myth and propaganda. You will nowhere experience this sense of freedom and individual dignity, supposed to be the essence of western values, in a China bent upon change along occidental lines.

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SIR—N.H. Antia's letter criticizing India's scientific progress (*Nature* 331, 384; 1988) is unduly harsh and emotional. If the "capitalist West" has a "morbid fear of communism", then Antia's letter reveals a distorted view of India and adoration for so-called communism. Many of the problems of the poor in India are due to the increasing population, which has nearly doubled since independence, and rises more rapidly in economically lower strata of society. China has been able to arrest the sharp rise in population at gunpoint. In China, it is not the individuals who decide how many children they should have but the state.

India's recent history shows that the suppression of freedom by Mrs Gandhi pushed her out of office. The result of an election does not depend just on the votes of the 'privileged' but on those of the masses, which shows how important freedom is for an average Indian. It would

have been shameful for India to take the path of China in order to make more rapid scientific, technological and material progress and to pay the price not only with the suppression of freedom of expression and movement, but also by sacrificing the most vibrant and oldest surviving traditions in the world.

Indian scientists and doctors going abroad speak for India's great scientific and medical awareness and competence in global participation in those two fields. The rural population moving to urban areas and living there in bad conditions is a transitional phenomenon of any industrial revolution, as history shows. "Freedom for a few only" are the words used by communists or latent communists even in the affluent West.

Antia should take a balanced view of the problem and take note of the price China has paid in terms of its culture and tradition as well as human lives and suppression.

It is better for us, as scientists, to take a more positive view in order to cure the evils of Indian society rather than condemning its achievements in science and technology. Those who condemn are also the first to be outraged at the suppression of any freedom. It is easier to criticize and condemn a system when one is allowed to do so. If such people were forbidden to travel from Bombay to Poona without the permission of the authorities, they would realize the value of freedom.

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## Unjust Congress

SIR—We were distressed by your report (*Nature* 332, 670; 1988) on the recent congressional hearings regarding fraud in science. Your article merely repeated the various allegations made at the hearings by Drs Margot O'Toole, Charles Maplethorpe, Ned Feder and Mr Walter Stewart regarding the paper by Weaver *et al.* that appeared in *Cell*.

As the three scientists who, on O'Toole's request, reviewed the data on which the *Cell* article was based, we feel that other views should have been aired, not just the charges. Your failure to do this perpetuates the injustice generated by hearings in which none of the scientists who performed the relevant experiments or participated in the reviews was asked to testify. The result is that a one-sided version of events has been put before the public.

O'Toole initially turned to us as friends to seek our help and judgement on what to her seemed evidence of fraud involving the article in *Cell*. Her accusations were not based on her own work at Massachusetts Institute of Technology (MIT), but on some notebook data that she had

come across by chance. After reviewing the data and consulting the involved parties, we unanimously concluded that there was (1) no sign of fraud; (2) no evidence of misrepresentation; (3) no error that undermined the article's basic conclusion. Contrary to O'Toole's statement at the hearings, we did not concede that her criticism was sound.

It was suggested at the hearings that the whistle-blowers in this case have sacrificed their careers by questioning the science of senior investigators. To our knowledge, nothing was done to impede O'Toole in making an official complaint to MIT or *Cell*. On the contrary, she testified that she was encouraged to ask for an official inquiry but chose not to do so. We are not aware of steps that she has taken to continue her career, nor have we, or anyone to our knowledge, made any attempt to block her in this endeavour. Furthermore, the other person who raised charges of fraud, Dr Charles Maplethorpe, is still in science.

Up to the present, the scientific issues have not been put before the public. We thus welcome the independent scientific investigation being organized by the National Institutes of Health. But a picture depicting the authors of the *Cell* article as guilty has been created, and we fear that no matter what results from the official inquiry, an after-image will remain.

It has always been our belief that the most important test of a scientific claim is independent experimental verification, not judicial review. We hope that the editors and readers of *Nature* share this view.

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## Life begins at . . .

SIR—In their paper on human gene expression<sup>1</sup>, Braude *et al.* use the term "pre-embryo", though obviously with a certain reserve as they were careful to reference the source<sup>2</sup>. The term itself is not an objective, well-defined scientific descriptive, but in its origins and application it is a mere administrative device to obviate the legal and ethical considerations limiting experiment on human entities at more advanced stages of development, however far that ulterior motive may be from the intentions of the authors.