

THURSDAY, JUNE 9, 1870

THE NATURAL HISTORY COLLECTIONS

WE have been favoured with a copy of a memorial, drawn up as long ago as 1858, by some of the most distinguished geologists and botanists in England, on the subject of the organisation of the British Museum Natural History Collections, the removal of which was then thought to be imminent. As our readers are aware, no steps towards this removal have yet been taken, but as the subject has been brought again before Parliament, it would be well that so carefully considered a document as this appears to be should be weighed in reference to any contemplated change in the governance and disposition of our national Natural History Collections.

It is further most desirable that gentlemen interested in this subject should communicate their views upon the proposals embodied in this memorial to the public, and such will be thankfully received by the Editor of NATURE. Of the nine memorialists, four are zoologists, all happily alive. Of the five botanists, on the other hand, Mr. Bentham alone survives; it is especially desirable that the opinions of botanists on so important a question should be heard.

Copy of a Memorial addressed to the Right Honourable the Chancellor of the Exchequer.

SIR,—The necessity of the removal of the Natural History departments from the British Museum having been recently brought prominently before the public, and it being understood that the question of their reorganisation in another locality is under consideration, the undersigned zoologists and botanists, professionally or otherwise engaged in the pursuit of natural science, feel it their duty to lay before Her Majesty's Government the views they entertain as to the arrangements by which national collections in Natural History can be best adapted to the twofold object of the advancement of science, and its general diffusion among the public,—to show how far the Scientific Museums of the metropolis and its vicinity, in their present condition, answer these purposes, and to suggest such modifications or additional arrangements as appear requisite to render them more thoroughly efficient.

The Scientific Collections or Museums, whether Zoological or Botanical, required for the objects above stated, may be arranged under the following heads:—

1. A general and comprehensive Typical or Popular Museum, in which all prominent forms or types of Animals and Plants, recent or fossil, should be so displayed as to give the public an idea of the vast extent and variety of natural objects, to diffuse a general knowledge of the results obtained by science in their investigation and classification, and to serve as a general introduction to the student of Natural History.

2. A complete Scientific Museum, in which collections of all obtainable Animals and Plants and their parts, whether recent or fossil, and of a sufficient number of specimens, should be disposed conveniently for study; and to which should be exclusively attached an appropriate *Library*, or collection of books and illustrations relating to science, wholly independent of any general library.

3. A comprehensive Economic Museum, in which Economic Products, whether Zoological or Botanical, with Illustrations of the processes by which they are obtained and applied to use, should be so disposed as best to assist the progress of Commerce and the Arts.

4. Collections of Living Animals and Plants, or Zoological and Botanical Gardens.

The Typical or Popular Museum, for the daily use of the general public, which might be advantageously annexed to the Scientific Museum, would require a large building, in a light, airy, and accessible situation. The collections should be displayed in spacious galleries, in glass cases, so closed as to protect them from the dirt and dust raised by the thousands who would visit them; and sufficient room should be allowed within the cases to admit of affixing to the specimens, without confusion, their names, and such illustrations as are necessary to render them intelligible and instructive to the student and the general public.

The Economic Museums and living Collections in Botany might be quite independent of the Zoological ones.

The Scientific Museum, in Zoology as in Botany, is the most important of all. It is indispensable for the study of natural science, although not suited for public exhibition. Without it the naturalist cannot even name or arrange the materials for the Typical, Economic or Living Collections, so as to convey any useful information to the public. The specimens, though in need of the same conditions of light, airiness, &c., as, and far more numerous than, those exposed in the Typical or Popular Museum, would occupy less space; and they would require a different arrangement, in order that the specimens might, without injury, be frequently taken from their receptacles for examination. This Scientific Museum, moreover, would be useless unless an appropriate library were included in the same building.

The union of the Zoological and Botanical Society Museums in one locality is of no importance. The juxtaposition of each with its corresponding Living Collection is desirable, but not necessary; although, in the case of Botany, an extensive Herbarium and Library are indispensable appendages to the Garden and Economic Museum.

The existing Natural History Collections accessible to men of science and to the public, in or near the metropolis, are the following:—

In Botany.—The Kew Herbarium, as a scientific collection, is the finest in the world, and its importance is universally acknowledged by botanists. It has an excellent scientific library attached to it; it is admirably situated; and being in proximity with, and under the immediate control of the head of, the botanic garden, it supersedes the necessity of a separate herbarium for the use of that garden and museum. But a great part of it is not the property of the State; there is no building permanently appropriated for its accommodation, and it does not include any collection of fossil plants.

The Botanical Collection of the British Museum, consisting chiefly of the Banksian Herbarium, is important, but very imperfect. It is badly situated, on account of the dust and dirt of Great Russell Street; and the want of space in the existing buildings of the British Museum would prevent its extension, even were there an adequate advantage in maintaining, at the cost of the State, two Herbaria or Scientific Botanic Museums so near together as those of London and Kew. The British Museum also contains a valuable collection of fossil plants, but not more readily available for science than its zoological collections.

There exists no typical or popular Botanical Museum for public inspection.

The efficiency of the Botanical Gardens and Museum of Economic Botany at Kew, as now organised, and the consequent advantages to science and the public, are too generally recognised to need any comment on the part of your memorialists.

In Zoology.—The British Museum contains a magnificent collection of recent and fossil animals, the property of the State, and intended both for public exhibition and for scientific use. But there is no room for its proper dis-

play, nor for the provision of the necessary accommodation for its study—still less for the separation of a *popular typical* series for public inspection, apart from the great mass of specimens whose importance is appreciated only by professed naturalists. And, in the attempt to combine the two, the public are only dazzled and confused by the multiplicity of unexplained objects, densely crowded together on the shelves and cases; the man of science is, for three days in the week, deprived of the opportunity of real study; and the specimens themselves suffer severely from the dust and dirt of the locality, increased manifold by the tread of the crowds who pass through the galleries on public days,—the necessity of access to the specimens on other days preventing their being arranged in hermetically closed cases.

A Museum of Economic Zoology has been commenced at South Kensington.

There is an unrivalled Zoological Garden or living collection, well situated in the Regent's Park, but not the property of the State, nor receiving any other than indirect assistance, in the terms on which its site is granted.

The measures which your memorialists would respectfully urge upon the consideration of Her Majesty's Government, with a view to rendering the collections really available for the purposes for which they are intended, are the following:—

That the Zoological Collections at present existing in the British Museum be separated into two distinct collections,—the one to form a Typical or Popular Museum, the other to constitute the basis of a complete Scientific Museum.

These Museums might be lodged in one and the same building, and be under one direction, provided they were arranged in such a manner as to be separately accessible; so that the one would always be open to the public, the other to the man of science, or any person seeking for special information. This arrangement would involve no more trouble, and would be as little expensive as any other which could answer its double purpose, as the Typical or Popular Museum might at once be made almost complete, and would require but very slight, if any, additions.

In fact, the plan proposed is only a further development of the system according to which the Entomological, Conchological, and Osteological collections in the British Museum are already worked.

That an appropriate Zoological Library be attached to its Scientific Museum, totally independent of the zoological portion of the Library of the British Museum, which, in the opinion of your memorialists, is inseparable from the general library.

That the Scientific Zoological Museum and Library be placed under one head, directly responsible to one of Her Majesty's Ministers, or under an organisation similar to that which is practically found so efficient in regard to Botany.

That the Museum of Economic Zoology at South Kensington be further developed.

Your memorialists recommend that the whole of the Kew Herbarium become the property of, and be maintained by, the State, as is now the case with a portion of it—that the Banksian Herbarium and the fossil plants be transferred to it from the British Museum—and that a permanent building be provided for the accommodation at Kew of the Scientific Museum of Botany so formed.*

This consolidation of the Herbaria of Kew with those of the British Museum would afford the means of including in the Botanical Scientific Museum a geographical

* Since this Memorial was written great changes have taken place in the extent and position of the Botanical collections both at Kew and the British Museum, and the above recommendations would require some modification. This applies especially to the fossil plants, which it seems highly desirable to retain within an easy distance of the principal geological collections, and which might be fully illustrated by including the geographical botanical collection in the typical museum in London.—[G. B., June 1870.]

botanical collection for the illustration of the colonial vegetation of the British Empire, which, considering the extreme importance of vegetable products to the commerce of this country, your memorialists are convinced would be felt to be a great advantage.

Your memorialists recommend further, that in place of the Banksian Herbarium and other miscellaneous botanical collections now in the British Museum and closed to the public, a Typical or Popular Museum of Botany be formed in the same building as that proposed for the Typical or Popular Museum of Zoology, and, like it, be open daily to the public.

Such a collection would require no great space; it would be inexpensive, besides being in the highest degree instructive; and, like the Typical or Popular Zoological Collection, it would be of the greatest value to the public, and to the teachers and students of the Metropolitan Colleges.

That the Botanical Scientific Museum and its Library, the Museum of Economic Botany, and the Botanic Garden, remain, as at present, under one head, directly responsible to one of Her Majesty's Ministers.

The undersigned memorialists, consisting wholly of Zoologists and Botanists, have offered no suggestions respecting the very valuable Mineralogical Collection in the British Museum, although aware that, in case it should be resolved that the Natural History Collections generally should be removed to another locality, the disposal of the minerals also will probably come under consideration.

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WILLIAM B. CARPENTER, M.D., F.R.S. & Z.S., Registrar of the University of London.

CHAS. DARWIN, F.R.S., L.S. & G.S.

THOMAS HUXLEY, F.R.S., Professor of Natural History, Government School of Mines, Jermyn Street.

Nov. 18, 1858

LONGEVITY IN MAN AND ANIMALS

On Comparative Longevity in Man and the Lower Animals. By E. Ray Lankester, B.A., Junior Student of Christ Church, Oxford. (London: Macmillan and Co. 1870.)

IN this interesting little essay Mr. Lankester appears to have accumulated most of the facts with which we are at present acquainted, in respect to the duration of life. He defines longevity to be the length of time during which life is exhibited in an individual; but does not, of course, apply the term individual to entire masses proceeding, as in the case of *alsinistrum* and many polypes, from a process of asexual generation; and he proceeds to point out that there is a longevity belonging to the species, and a longevity characteristic of the individual, and further, that the average longevity of a species never equals its potential longevity, since a thousand accidents happen to destroy individuals at an early period of their