

DUTCH NATURAL HISTORY MUSEUMS IN THE SERVICE OF NATURE PRESERVATION

by

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Since the time of the great geographical discoveries, since Henry the Navigator of Portugal and Christopher Columbus started to open up the whole world to the curiosity of naturalists, the Dutch and the English have played an important role in the explorations of the riches of God's Nature.

The Monarchs were the first to set up collections of animals and other natural curiosities from foreign tropical (and also arctic) countries and from everywhere. We need only remember Albrecht Dürer's diary from 1520-1521, when he visited the Low Countries.

In reality this interest in curiosities from foreign countries and the tendency to make collections of them was much older, and can certainly be traced back to the time of the Crusaders, who brought beautiful things from the Near East to their European homes.

Gradually the fashion of making collections shifted from the Monarchs to the merchants, and in the 18th century nearly every well-to-do businessman had a collection of natural curiosities of some sort.

Some people, especially medical men and apothecaries, collected with a scientific purpose. It is to such collectors that we owe much for the promotion of natural science. I need only recall such names as John Ray, Jan Swammerdam, Albertus Seba, Linnæus and his patrons, to bring to mind the importance such collections have had for natural history.

At present, some 15,000 species of worms are known, 13,000 sponges and coelenterates (corals etc.), 8,000 seastars, sea-urchins etc., 100,000 mollusks, 70,000 vertebrates (comprising fishes, amphibians, reptiles, birds and mammals) and not less than 800,000 species of insects. In total, more than a million of animal species are known at present. But it is estimated that we know now only one tenth of all existing insect species.

If we consider the difficulties in identifying an animal or plant species, the acumen necessary to differentiate it from its nearest relatives, the difficulties encountered in clearing up the succeeding stages of its life cycle, the wide reading necessary to know whether it has already been described, and got a name, we are at once convinced of the lasting necessity and the enduring importance of our present natural history museums. Some people are inclined to consider museum collections as old-fashioned rubbish, and museum specialists as odd specimens of the human species, fossilized in their childish curiosity for strange objects.

Yet, the registration service our museums perform as their first task, is of the utmost importance for all investigations. Before any scientific research can start at all, we must know what species of animal or plant we are dealing with. If we want to protect a bird or control some noxious animal; if a geologist wants to know the age of some layer in the earth's crust; if the government wants to make a law in which some animal or plant is involved,—we must also, before all things, know what species we are dealing with. I must here call your attention to the combating of rats, of malaria and other pests and infectious diseases. Often a parasite, e.g. a liverfluke, lives in one species of mollusk only as an intermediate host, while it does not thrive in any other species. Bumblebees, considered as rather interesting insects only recently, appear to be so important for the growth and fructification of some crops that the agricultural scientists ask for the identification of all the species. Hundreds of pounds, even thousands, may be lost by the wrong identification of species and hence of the country of origin of some noxious insect.

In Holland, agriculturists schemed to destroy the jackdaw nests, because these were harmful for the wintercorn, but fortunately the ornithologist of our

Museum, Professor Voous, could show that the jackdaws that caused the damage were winterguests from the Northeast. Hence the killing of our summerguests and their young would have had no effect whatever on the loss of corn. This meant saving a lot of money.

It thus seems unnecessary to point out the importance of our present Museums of Natural History for culture and science in general. Without the rich Museum material also it would be impossible to study the variability, the specific differentiation, the zoogeographical speciation of plants and animals. The description of the whole wealth of the botanical and animal kingdoms of the earth is the task of the modern museum. But also an inquiry into the causes of this exuberant richness, into its evolution, into its distribution, into the curious adaptations living creatures show to their environment, to the circumstances under which they occur and thrive, belongs to the field of activity of a modern museum.

This is the general and comprehensive task of our Natural History Museums and it is only in the Museums with large collections that this task can properly be fulfilled. Is there no room then, at the present time, for the smaller museums? Should they abandon their collections and abstain from scientific research? Has the old curiosity motive served its term?

To my opinion it certainly has not! Wonder at, admiration for the works of Nature, are the first and most important requirements for any investigation of natural objects. Every Museum, no matter whether small or large, has its justification in evoking in the visitors that wonder and admiration which can, indeed must be or become the same as they used to be in the old "amateur", in the lover of nature of olden times. Without wonder and admiration science has no sense! Even for the man of practical application the Museum thus has its use. But is practical application, and understanding of nature for practical purposes only, the aim of biological science? We must take care not to forget its primary and most important function and aim, leading to an understanding of and love for the whole of Creation.

And here we touch on the special subject of this article, the importance of our natural history museums for Nature Preservation. Nature Preservation is only possible if our museums succeed in rousing and fostering that love and admiration for living nature, stimulating us and being a source of vital inspiration to all men. We usually realize this only after a change of our natural surroundings for artificial ones, when the wealth and luxury of free and intact nature are lost and have been replaced, either by the rightly so called culture-steppe, or by parks and other artificial

human substitutes.

The process of civilization, of course, cannot be stopped and we have to be content with the human substitutes, especially in countries that have been intensely inhabited and cultivated for ages.

It is desirable to preserve even some part of this reshaped nature in diverse stages,—stages which may be "wild" and natural enough to satisfy Man's need of Nature's beauty and freedom, for restoration of his health and peace of mind.

In such Nature Reserves, Museums can help, evoking the visitor's interest in the objects that may be seen and observed. A trailside Museum gives the necessary information on the geology, on the vegetation and on the animals living in the Reserve, in order to make a visit more profitable, to combine the dreaming of the poet in us with the understanding science can give.

In Holland, Nature Preservation started about the beginning of this century. In 1905 the "Vereniging tot Behoud van Natuurmonumenten in Nederland" was founded. It has now possession of some 73 important, smaller or larger plots with a total surface of 17,500 hectares. The largest park is the "Veluwezoom", covering 4,100 hectares. Moreover, several general and provincial societies possess nature reserves of lesser or greater importance or propagate the preservation of beautiful scenery. The Government has declared 11,000 hectares of the domanial lands and some 7,500 hectares, which were bought, as Nature Monuments, because they were important from geological, botanical, ornithological or even archaeological or other points of view. Special laws provide for afforestation and for the preservation or restoration of beautiful scenery. No works of exploitation, cultivation or reallocation can be started without permission of the Government, which asks the advice of a special Scientific Commission of the Council for Nature Preservation and of the Department for Landscape-planning of the State Forestry Department. A special laboratory (R.I.V.O.N., Rijks Instituut voor Veldbiologisch Onderzoek ten behoeve van het Natuurbehoud), with a staff of about ten scientists, studies the problems arising in connection with the protection and preservation of nature, another (I.T.B.O.N., Instituut voor Toegepast Biologisch Onderzoek in de Natuur) advises on practical questions of forestry and game preservation.

In 1954, the Minister of Education, Arts and Sciences, His Excellency CALS, decided to institute a special commission to advise the Department, and especially the Division of Archaeology and Nature Preservation, on those Museums of Natural History,

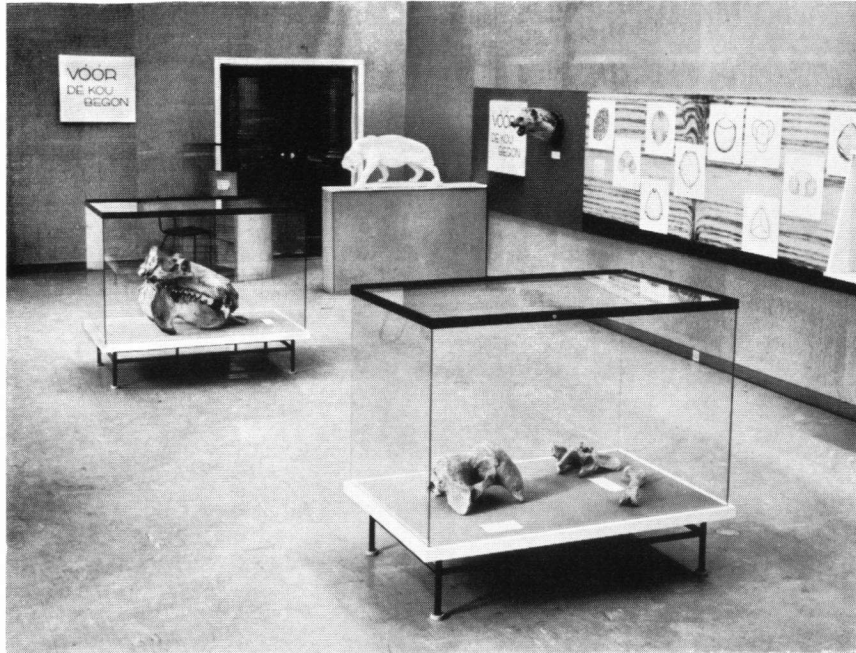


Fig. 1. Exhibition on the Ice Ages, in the Zoological Museum of the University of Amsterdam. This is part of a room showing the animal world "Before the cold began". To the right an explanation of pollen investigations.



Fig. 2. Exhibition of the Ice Ages, in the Zoological Museum of the University of Amsterdam. This is part of a room showing the animal world "After the ice left us". Copies (in colour) of cave paintings.

which asked for governmental financial help or advice. It was inaugurated officially by the Secretary General, Mr. REININK, on the 17th of December 1954.

From the opening address I quote: "It is a trend of modern developments that a Museum no longer is a depository for culturally important objects only, but also has the task to educate people towards culture itself. Technical over-development threatens to alienate man from nature, to the detriment of his happiness and of his prosperity. Asphalt and stone are a poor matrix for the human soul. City dwellers know this and accordingly their recreation is directed towards nature. But many of them do not succeed in restoring this connection with nature and this often results in mischief, which reveals boredom and dissatisfaction. By teaching them the way back to Nature, by teaching them to look at it, to love it, to understand it, we can again open to them an indispensable source of Life."

"The insight into the output of nature as a product of natural balance, the upsetting of which by artificial measures cannot pass unpunished, is indispensable, not only to engineers and managers, but to all responsible citizens or citizens-to-be. The imparting of understanding of these subtle equilibria in nature, and the consequences of disturbing them, is pre-eminently the field of activity of our Museums.

"To reach the whole population we want a larger number of small and simple museums, founded in the centre of certain districts for the inhabitants, especially for the schoolchildren and, above all, if the district is touristically attractive, for the holiday-maker, who is at leisure and in the mood to be informed about the things that can be seen in nature in the district."

"Our Ministry does not have at its disposal the special experience, necessary to direct and instruct these museums, not even to decide upon a justified subsidy programme. Some financial support from the government may prove to be justified or even advisable."

"Therefore, we have decided to found an Advisory Committee and we are glad that a number of especially expert persons with experience and interest in different aspects of our problem have been willing to serve on the Committee."

"A definite program is not given to this Committee; the Minister desires to be advised in the most general sense on what actions he should take. In which way the good offices of the Ministry towards the Natural History Museums should develop in the long run is a question on which we beg the Committee to inform us."

This beginning was soon followed by an extensive report by the active secretary, Dr. A. C. V. VAN BEMMEL, now Director of the Rotterdam Zoo, from which we quote:—

At the present time about 42 museums in Holland are either purely Natural History Museums or have a more or less important natural history department.

Seven museums are connected with a University, whereas seven are specialized in primary and secondary schools. Four are centres of natural history societies, whereas eight others provide a home for groups of older or younger naturalists.

Some 14 museums may be regarded as working for a certain town or district, whereas 10 are specialized on a touristically important area, and eight give special attention to nature protection.

Scientific work by University men is done in 10 museums, in 5 others by amateurs under the direction of a university man, the rest are managed by amateurs.

Permanent exhibitions are shown by 36 museums, three only give changing exhibits.

It is a curious fact that eleven museums are in the possession of the expensive ideal of every smaller museum, a habitat group. Only a few use quite modern conceptions in their way of exhibiting, the others show "classical" mountings. This proved to be an item where our advice was very important and even of economic consequence.

Every collector has the desire and the tendency to show everything he possesses and tell everything he considers of interest. This is impossible. Experience has taught us that limitation in the number of objects and of subjects is necessary. Thus the whole is neither too tiring, nor too large and too crowded for a survey.

Expensive imitations of nature are really unnecessary, even undesirable. Honesty in showing the whole as an evocation, not an imitation of nature renders it much more acceptable and agreeable to the public. It is not necessary to make these local exhibits very expensive, if only they are clear and aesthetically balanced.

To meet the demand of amateurs for identifying things they have seen, putting the necessary illustrated books at their disposal proved to be quite sufficient and satisfactory.

Mapping the Dutch Natural History Museums together with the areas devoted to recreation, showed a curious discrepancy and pointed to the obvious desirability of coordination.

New museums can be founded only gradually in those areas where they are lacking. The initiative of local enthusiasts should be stimulated. The moment

they ask for a governmental subvention, they usually are willing to take advice which, as a rule, renders their exhibitions at the same time less expensive and more acceptable to the public. Of course, it is necessary regularly to see whether they are sticking to the advised scheme. Many amateurs are inclined to put new acquisitions (e.g. a cuttlefish in an ugly bottle) among the rest of the exhibits, without any consideration of the thematic or aesthetic principle underlying the whole.

It is clear that a really good exhibition requires not only expert knowledge on the subject, but also experience and ability in the technique of showing things to the public. We, in the Zoological Museum of the Amsterdam University, as an example, are happy to have at our disposal both a biologist with artistic ability, and an artist interested in exhibition technique. The first modernization of the old exhibition rooms has been designed and executed under the supervision of DICK ELFFERS, the well-known expert in exhibition design; at first one room at the end of 1952 and then the others in the beginning of the year 1954. Since then we have been changing the exhibition yearly, showing new topics, such as: Evolution—The Meaning of Colour in the Animal Kingdom—Form and Function—Man against Nature—The Glacial Period—Whales—West Indian Fauna—South-African Game—etc. It takes a lot of time and experimenting to express in a concrete, inspiring form the gist of the subject, adapting the objects to the available space and providing suitable backgrounds, rendering the whole colourful and lively, though not tiring to the visitor. The different items must not be separated too distinctly. Therefore glass cases have to be avoided when possible. The visitor should be taken up in the whole exhibition. Moreover he should have the feeling of finding himself in comfortable surroundings, which do not disturb his peace of mind and, on the other hand, stimulate his interest and induce him to follow the unfolding of the theme. Five rooms only are at our disposal for the purpose, but these prove to be sufficient for giving a survey of a certain theme, a survey not too long and not too tiring.

It is interesting to compare the reactions on the modern exhibition and on the Diorama (1925)—a habitat group, Spring in the Dutch Dunes, which also is part of our Museum.

Many people admire the clever imitation shown in the habitat group, but on the other hand nearly

everybody admits that the evocational exhibit, artistically and intellectually, is much more satisfying. Yet, for the present, it seems wiser to me not to dispose altogether of the habitat imitation, since it still meets the enthusiasm of very many people (compare also the remarks of N. J. Burns in *Museum* VI, 1953, p. 165–166). I cannot forego to mention in this connection the beautiful habitat groups in the Naturhistorisches Museum in Bern.

I hope to have shown that it is not an easy thing to do, making a good exhibit. It is not enough to be an expert biologist, one must be an artist and a psychologist as well, have the imagination and inventiveness of the designer of modern window display. This asks for a natural ability, thoroughly trained and sufficiently ripened. Therefore, it seems to me that it cannot be the task of any museum director or curator of a smaller museum. It will be necessary to have such an expert in general service, who travels about, designs and advises the local directors, establishes the connections between the museums, knows where to ask for special requisites and has his staff of one or more taxidermists, sculptors, draughtsmen. He has to discuss the themes with the directors and with the artists who will have to adapt the designs of the exhibition to the rooms available. They all together will have to supervise or often even to realize the whole exhibition.

In Holland, we have not yet gone as far as that, because of the financial circumstances—but in many cases, we of the Advisory Committee, managed to give an advice and to procure the help of local artists, who lovingly devoted themselves to this very interesting and satisfying kind of work, satisfying, as it means a possibility for them to appeal to the visitors and to educate them in a positively aesthetic sense. It is here that admiration for the beauty and wonders of Nature meets with the creative mind. Both are based on a deep reverence for the wonders of life and creation, both meet here in evoking that reverence for living Nature, which is the only true and lasting foundation on which also Nature Preservation should be built.

I am glad to note how this happy idea of the Dutch Government, born through the initiative of mr. BLOEMERS, then a high official of the Division of Nature Preservation, is being realized steadily, and is more and more playing its due part in the preservation of what man, in competition instead of in co-operation with Nature, still has left to him.