

THE CHILDREN'S MUSEUM OF BROOKLYN INSTITUTE.

In the spring of 1899, Prof. W. H. Goodyear, the Curator of Fine Arts of the Museum of the Brooklyn Institute of Arts and Sciences, suggested to the Board of Trustees and the Council of the Institute that a "children's museum" be established in a building of which the Brooklyn Institute had the use. The Institute has been for many years engaged, through its several departments and sections, in making museum collections and libraries, and in giving instructions by lectures and courses of study on many subjects, and it has also established, under the auspices of its Department of Pedagogy a pedagogical museum and library, which will represent the history of education from the earliest times, and will illustrate the equipment of schools and colleges in the work of giving instruction. The establishment of the museum which is especially adapted to the interests of young people between the ages of six and twenty years, has never before been attempted on any extensive or carefully devised plan, and the present museum which has been started will prove a most interesting model for similar institutions.

It is the purpose of the children's museum to build up gradually for the children of Brooklyn and the surrounding neighborhood a collection that will delight and instruct the children who visit it; to bring together collections in every branch of natural history that is calculated to interest children, and to stimulate their powers of observation and reflection; and to illustrate, by collections of pictures, cartoons, charts, models, and maps, each of the important branches of knowledge which are taught in the elementary schools. The museum, through its collections, library, curator and assistants, attempts to bring the child or young person, whether attending school or not, into direct relation with the most important subjects that appeal to the interest of their daily life, in their school work, in the reading, in their games and rambles in the fields, and in the industries which are carried on about them.

The building is situated in what is known as Bedford Park, and thus has advantages of light and air. It was an old house of generous proportions which, after being remodeled, redecorated and lighted by the electric light, forms an almost ideal building for a museum of this kind where the rooms should not be too large. On the ground floor are six rooms devoted to exhibition purposes, and on the second floor is the library and curator's office. These rooms are known as the model room, animal room, plant room, anatomical room, meteorological room and lecture room. The rooms are charmingly decorated in different colors, and all of the cases are of proper height so that the children can obtain excellent views of the various collections.

In the model room we find collections illustrating crystallography, the mineral crystals being placed in conjunction with models of crystal. Here will be collections of the useful ores, useful minerals, a collection of drift rocks of Long Island and similar collections. They are all labeled with great care, special attention being paid to simplicity, without departing in any degree from scientific accuracy. Upon the walls are many charts, and altogether there are 900 charts exposed to view and kept in the chart rooms. They can be changed at will and are most interesting, embracing nearly all of the subjects of science as well as most of the useful arts. Some of them will be referred to later. In the model room will be found a splendid series of twenty-four anatomical models. Thus, we find a silk-worm, 5 feet long, executed in papier mache; it can be separated, and the wonderful process of spinning the delicate fibers can be explained by reference to such a model to quite a large audience, because of the very considerable size of the model. The edible snail which is shown in our engraving, articulated and dissected, is $3\frac{1}{2}$ feet long, and is a splendid example of the art of papier mache working. These models, are, of course, colored to give the appearance of life. In this room will also be found a special collection of shells of Long

Island, and special efforts is made to interest the children and young people in the fauna and flora and mineralogy of the immediate neighborhood in which they live. Probably the most interesting collection in the room is a small "type" collection which is considerably used in France for elementary schools. It consists of a number of real specimens. There are 35 minerals, 13 fossils, 10 recent mollusca, 90 insects, 2 crustaceans, 20 plants, 2 fishes, 3 birds, 3 worms, 3 radiates, 3 reptiles and 2 mammals, making, a total of 185 specimens. This interesting collection is sold in France



THE ANIMAL ROOM IN THE CHILDREN'S MUSEUM.

for \$20, and it seems as though every school in the country might possess a type collection of this kind. The specimens are excellent. Thus, we have a mounted bat, handsomely stuffed birds, and a snake a foot long.

The charts hung around the room refer to useful woods, vegetable products, cereals, alimentary plants, gums and resins, minerals, textile fabrics, fertilizers, geology, mineralogy, and the manufacture of gas, etc. Take for example the latter; here we find the forms of coal illustrated, showing the Devonian plants, then diagrams showing the production of gas, samples of by-products in little bottles, etc. In the animal room there are a large number of interesting models of extinct monsters. Thus, the one shown in our engraving, the "mastadon longirostris" of the Tertiary of Europe,

is two feet long, and the other animals are in about the same proportion. One of our engravings shows the case holding the extinct animals, and also some of the charts upon the walls and the small busts upon the mantel show various types of races. In another case, in the same room, are models of animals which now exist. In the same room are charts illustrating the various food industries, manufacture of textiles, etc. Thus, for example, we have a chart showing the leather industry, and attached to the stiff cardboard is a sample of hide taken from the animal, the various tanning materials, coloring materials, the dyeing and finally the bristles and the manufacture of brushes.

The botanical and flower room contains, in addition to the charts, some forty-two large flower models which can all be dissected. In a case in the center of the room is a collection of Long Island lepidoptera, and the life history of the honey bee. In a case to the left will be seen some of the many microscopes owned by the Institute. It also shows the height of most of the cases, and also how effective these charts, which are not at all expensive, can be made in the decoration of a schoolroom. In the anatomical room, will be found some very large and handsome models such as the human heart, shown in our engraving, articulated and dissected. Here will be found the ear and other parts of the human anatomy. The lecture room seats forty, and it is provided with an electric lantern for projecting lantern slides upon the screen, arrangements being provided for making the room semi-dark, thus enabling the lecturer to see the children at all times and keep them under control. With the electric light the images are bright enough for all ordinary purposes. Around the room are various charts and models, and there is a lecture platform at the sides of which are cases containing chemicals, so that simple experiments, such as the chemistry of digestion, can be carried on. It is intended to have teachers from the various schools bring their pupils to this room where they can lecture, using the splendid collection of material at hand. Of course, the large proportion of lectures will be given by the curator, Prof. R. Ellsworth Call, M.D., M.Sc., Ph.D., who is very enthusiastic concerning the work of the children's museum,

and he has added largely to its collection. In the course of a few months Dr. Call anticipates that all the specimens will be labeled, and that he will be in a position to bring the museum into an even greater state of efficiency than it now is.

In the lecture room there is a map of France on which the natural resources and manufactures are indicated by small specimens attached to it. Thus, the wine-growing sections of the country are indicated by small bottles of wine; coal which is admirably distributed all over the country is indicated by a number of small pieces of coal wired on to the chart; shipping is indicated by little metal ships; glass manufacture by a small piece of glass, etc. Dr. Call is at present working on a chart of the United States on approximately the same lines. There are at the present time a number of meteorological instruments installed in the tower of the building, and in one of the lower rooms are samples of all of the charts issued by the Weather Bureau. A self-recording anemometer is connected electrically with the revolving disks upon the roof. There are also self-recording thermographs, a barograph, a self-recording thermometer, and a standard barometer. There are also collections illustrating geography, history, etc.

In a few words the scope of the children's museum may be said to include the great round of human endeavor and of human interest, so far as they appeal to the child, or so far as they may be made to subserve the cause of education of youth. Its collections are all selective and have a real definite relation to the home and school life of the child.

THE nearest settlement to Cape Nome prior to 1899, was St. Michael, 100 miles to the southeast, which is the starting place of steamers for the Yukon River.



A CORNER IN THE BOTANICAL ROOM OF THE CHILDREN'S MUSEUM.

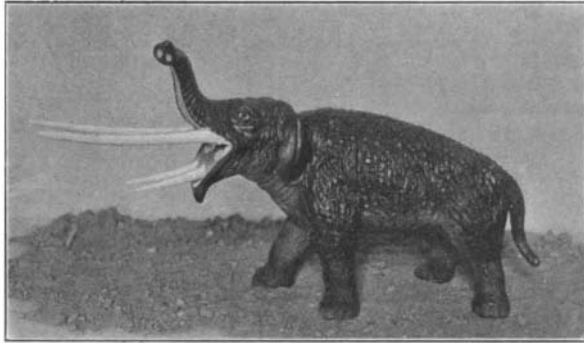
The United States Biological Survey.

The work carried on by the Division of Biological Survey of the United States Department of Agriculture is most important, and the methods employed and the results obtained are of great interest. During the fiscal year of 1898-99 work was carried on in several states and territories, and also in British Columbia and the Northwest territories. Under the personal supervision of Dr. C. Hart Merriam, camps were occupied on Mount Shasta from July 15 to October 3, 1898. The peak was completely encircled, the several life zones were outlined with great care, and data were secured regarding the distribution of characteristic mammals, birds and plants, and many side trips were taken; and in the spring of 1899, supplementary collections were made with a view to covering the entire northern part of California and extending the biological reconnaissance southwest. The discovery of gold in the Klondike region and several points in Alaska has aroused general interest in the resources of the territory, and the rush of miners and emigrants to the new gold fields brought about rapid development in the means of communication to the Upper Yukon. The regions, which were practically inaccessible, can now be explored with comparatively little difficulty. It was, therefore, deemed desirable to begin systematic work in Alaska during the summer of 1899, and through the courtesy of Edward H. Harriman, Esq., of New York, an invitation was extended to the Biological Survey to join an expedition he had fitted out at his own expense for a trip along the Alaskan coast. Dr. C. Hart Merriam with two assistants accepted the invitation and spent two months in active field work at numerous localities, most of which are out of the regular routes of travel. The steamer which had been chartered was fitted up with all necessary appliances for scientific work, and offered unusual facilities for the collection and preparation of the material. The results obtained were most satisfactory, and as the Upper Yukon is practically unexplored field, a systematic study of the fauna along its whole course aided in throwing much light on the northern limits of the ranges of many species. As a party was also detailed to work down the Yukon River, the practically simultaneous exploration of the coast and interior, promises to offer important data for mapping the life zones in South Alaska, which will be most useful.

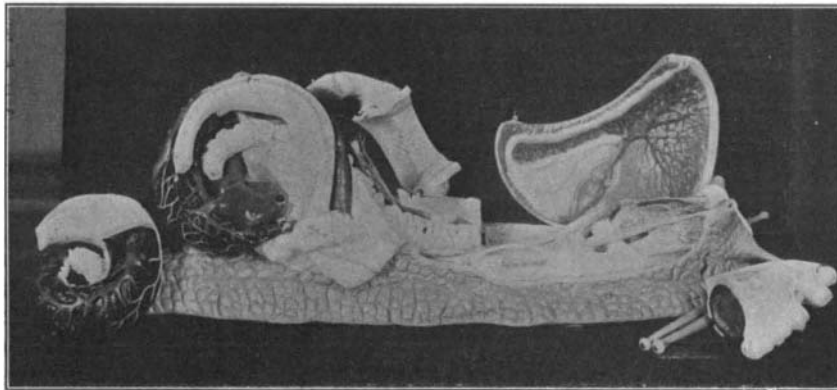
The subject of the economic relations of birds has been very carefully investigated by the division, and during the year 1881 birds' stomachs were received and 1961 were examined in the laboratory. The total number of birds' stomachs in the collection amounts to 31,300, and represents the accumulation of fourteen years. These stomachs, of course, offer valuable information upon the food of the various birds in their relation to crops; for instance, complaint is made of the depredations of the blackbird which breeds in enormous numbers in the swamps of the Upper Mississippi Valley and destroys considerable grain in the early autumn. The material now on hand shows definitely the damage done by each species, and also the members of the group which offset their grain-eating record by the destruction of insects. In addition to the examination of the stomachs of the birds in the laboratory, a great deal of work has been done in the field to ascertain whether birds show marked preference in selecting a food, or simply that which is most abundant, or most readily obtainable. Stomach examination shows what kind of food a bird has eaten, but it is desirable to know whether birds habitually reject other kinds of food, especially insects, which are equally abundant. By the careful examination made on a farm, it is believed to be possible to determine the effect of the birds on the crop at each season of the year.

Compilation and tabulation of data for mapping geographical distribution have continued practically without interruption during the year. Similar data has also been tabulated for mammals, as far as means were available. Many specimens have been received for identification as in former years, but the fact that the division is willing to identify specimens of mammals and birds, and that such material

can be forwarded to the department by mail and returned free of expense to the sender, does not seem to be as generally known as it should. The farmer or the fruit grower thus has an easy way of learning the name of the unfamiliar bird which is suspected of damaging his grain or fruit, and, moreover, this work tends to stimulate observation and study of habits of animals

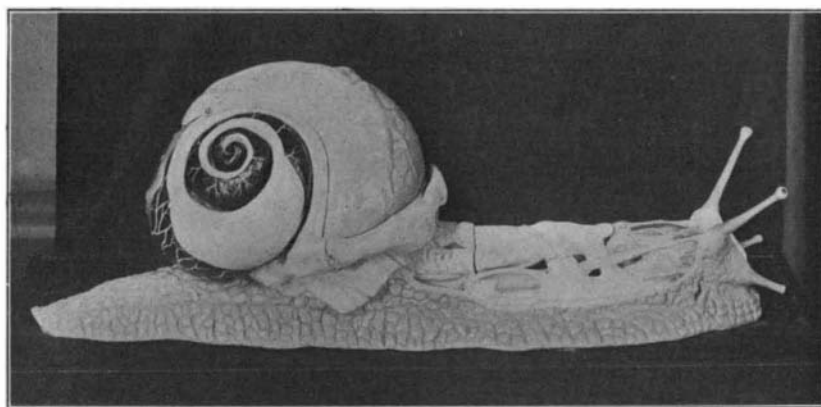


MODEL OF EXTINCT ANIMAL.

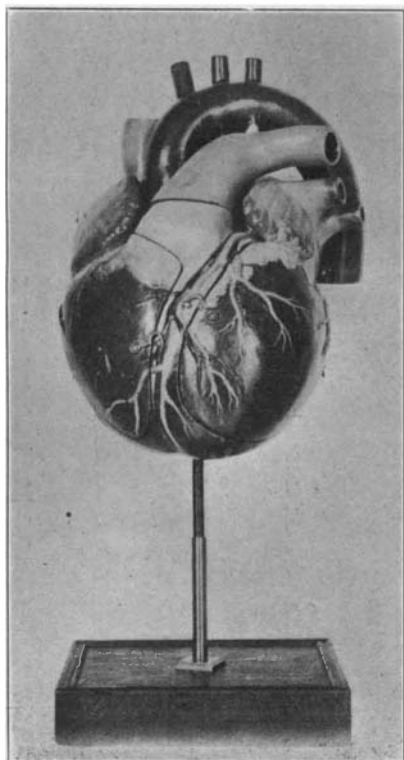


THE SNAIL DISSECTED.

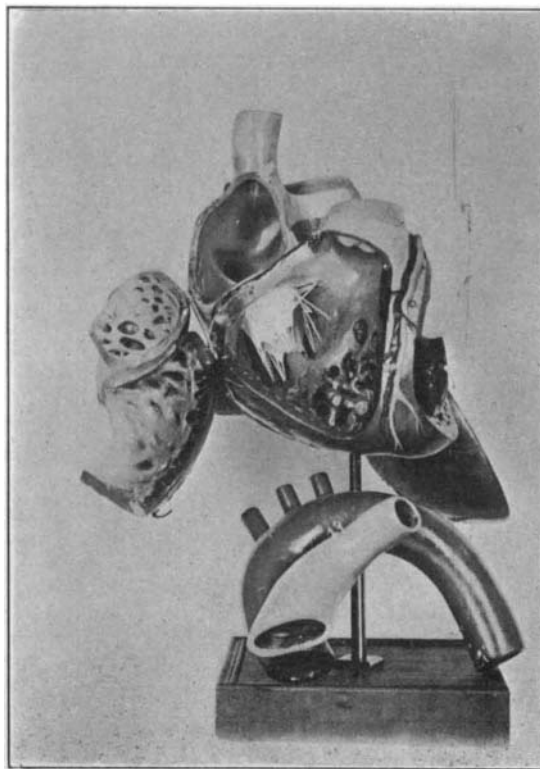
and birds, and thus has an educational value. The introduction of "nature study" in the common schools and the efforts of the Audubon societies in the cause of bird protection, are responsible in a large measure for the extraordinary popular interest in bird study which has developed in the past few years. Under the leadership of the College of Agriculture of Cornell University, this novel kind of school work has made wonderful progress in New York, and has also been successfully taken up in other States. Children are so easily interested in birds that elementary or-



MODEL OF SNAIL, THREE FEET LONG.



MODEL OF HUMAN HEART.



HUMAN HEART DISSECTED.

nithology has deservedly become one of the most popular branches of nature study, and its introduction into the lower grades of the public schools opens a wide field for teaching the economic side of the subject, as well as for correcting erroneous ideas now prevalent respecting the value of certain birds. One of the first suggestions for popularizing nature study was the observance of a bird day in the schools, and since this suggestion was endorsed by the department in 1894, the observance of bird day in connection with arbor day has been provided for by law in at least three States, Wisconsin, Minnesota and Connecticut, and has been adopted by many schools in other parts of the country. Of course the lack of the requisite knowledge on this subject on the part of the teachers, offers an obstacle to the success of bird study. It is said that 70,000 text books on birds have been sold by New York and Boston publishers during the last six years, and in the same time more than 200,000 copies of circulars and reports relating to birds have been distributed by the Department of Agriculture. Reports fresh from the press find their way into the schools and are almost immediately utilized in instruction. The

Farmers' Bulletin on "Common Birds in Relation to Agriculture" has been reprinted six times, and 140,000 copies have been published. All these things help the public in becoming interested in birds, and also to the appreciation of their value to agriculture.

Measures designed for the suppression of injurious animals and birds have been considered by the Legislatures of fully a quarter of the States of the Union during the past year, and results are that many bounties have been offered. Bounty legislation in the United States dates back until 1630, and during these two centuries and a half, more than 400 separate laws have been passed containing every conceivable provision for securing proper enforcement, avoiding fraud

and raising funds with which to pay rewards.

The English sparrow has attracted unusual attention during the year on account of the efforts made in Boston by the American Society of Bird Restoration to clear the sparrows from the Common in Public Garden. On March 15, five men in charge of a foreman, began to tear down the nests in the trees and buildings on the Common, and to close up the holes which had been used as nesting sites. During three weeks the work was carried on, when 1,000 sparrow eggs and 4,000 nests were destroyed, and 5,000 holes were closed. On April 5, the Mayor stopped the work, and on April 14 there were a hundred nests, on May 22 152 nests, and it was estimated that less than 450 birds were breeding there. The nest destruction aroused a storm of opposition. Numerous protests appeared in the papers and the department was flooded with letters. Unfortunately the experiment was not continued long enough to secure definite results, or to test this method of preventing the undue increase of the sparrow. The movement accomplished some good, however, not only in Boston, but elsewhere. The necessity for legislation restricting the introduction of noxious animals and birds is emphasized in the report of Acting Chief T. S.

Palmer. The danger of introducing certain Old World mammals, and birds is neither imaginary, nor of slight importance. The experience with the English sparrow shows this clearly, and the loss which have resulted from the introduction of the rabbit, the weasel, the English sparrow, starling and blackbird in New Zealand and the colonies of Eastern Australia has amounted to millions of dollars.

At Bosco Reale on the slope of Vesuvius, near Pompeii, where the great silver treasure was found a few years ago, recent excavations have brought to light some of the most remarkable paintings of the Roman period yet discovered. In the grounds of the Del Prisco villa a great peristyle and four large rooms have been unearthed, the walls of which are covered by twenty large frescoes of rich coloring and more careful execution than any hitherto known. The figures are of life size. It is to be hoped that some process will be discovered to preserve them more satisfactorily than those at Pompeii and in the Naples Museum.