during the early Cenozoic the herd instinct. As soon as an animal becomes a social organism all its acts, even such individualistic primitive impulses as self-preservation and nutrition, become social forces. For as soon as individuals unite into a group the acts of each affect all. A man may drink alcohol as an individual act, but in his family or when handling an automobile the social aspects of this act are seen.

Man is thus permeated with tendencies toward a definite expression of his energies, that is, impulses and instincts inherited from his brute forbears; but in addition he bears within himself powers, attained with his manhood, capable of controlling and guiding their expression. Below man life is very largely at the mercy of its impulses, but with the incoming of self-consciousness and the power of abstract reasoning man can scrutinize these impulses and decide how to modify their expression. He may not destroy these impulses which he has inherited with his body, for they are essential to his individual life and the continuance of the race. He must turn them into avenues socially useful, or the human race will cease to advance and finally to exist.

The entire behavior of each invertebrate animal and of many of the lower vertebrates is governed by the three primary impulses alone—self-preservation, nutrition and reproduction. When parental instinct appears it becomes, in its best expression, dominant. When in the cat, for example, the offspring are small, the mother will forego her own preservation or nutrition for the sake of her young. Again, when the herd instinct appears, it takes precedence over the others. In wild cattle the preservation of the herd is more important than the preservation of one adult or one young.

The next step is naturally that man with his higher attributes of self-consciousness and his power of abstract reasoning is gradually realizing the oneness of the human race, the brotherhood of man, as well as his kinship with and hence responsibility to the lower forms of life.

With the ability to stand off and view himself attained with the incoming of self-consciousness man apparently again passed through the earlier stages of social evolution. In very primitive man the family is the highest unit; next the tribe takes precedence, then the nation, and to-day the internation is being emphasized. Throughout earth history the movement has been from the care of the individual to the care of an increasingly larger group. In the recent past we note among mankind this enlarging conception of brotherhood in the freedom of slaves, the care of the deformed and crippled, the growing equality of opportunity for the sexes, recognition of insanity and crime as disease and a growth in religious tolerance. Once before, during Roman times, this truth of man's brotherhood was emphasized by the early Christian Church; but the lack of close intercommunication so necessary for any feeling of unity was a fatal obstacle. With worldwide commerce, wireless telegraphy, cheap printing and a growing ability by all peoples to read, it appears that to-day is the time for the next upward step, making of all people one great unity. This enlarging conception of brotherhood is, as we have seen, a force established with the initiation of life upon earth. It has not varied throughout the subsequent millions of years, and is thus a force with which man must reckon if he would continue to live upon earth.

In the very impulses which he inherits from his brute ancestors man possesses forces which he can control for the advancement of the race. For example, because of this inheritance man views with suspicion pronounced originality of conduct. What the majority say or do is considered right, not because each has reasoned it out for himself, but because the fear of originality of conduct is impressed into the very nerve cells of man's body through long ages of inheritance because of constant need. This is not only a tremendous factor in the stability of any social structure, such a society and government, but we recognize that changes may be brought about only slowly and by process of education. The essence of education is self-discovery and self-control. The education of the future should give not only the facts of man's inheritance but the knowledge of them as forces which can be controlled, and the profound conviction that the world must be made a better environment for future generations to be born into, and that each individual can thus modify it to some degree.

HERVEY W. SHIMER

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

THE AMERICAN MUSEUM OF NATURAL HISTORY

THE Fifty-fifth Annual Meeting of the Board of Trustees of The American Museum of Natural History was held at the residence of the president, Henry Fairfield Osborn, on the evening of February 4. The following changes took place in the Board of Trustees:

Mr. George F. Baker succeeded Mr. Cleveland H. Dodge as first vice-president, Mr. Dodge having served thirteen years in this office. Mr. Dodge continues his membership on the board which began in February, 1904. Mr. J. P. Morgan was reelected second vice-president for the twelfth year; Professor Henry Fairfield Osborn reelected to the presidency for the sixteenth year; Mr. Percy R. Pyne was reelected secretary for the fourth year.

The late Mr. Thomas DeWitt Cuyler is succeeded

by Mr. Roswell Miller, a graduate of Princeton, an engineer by training, son of the late Roswell Miller, of the Chicago, Milwaukee & St. Paul Railway. Mr. Arthur Curtiss James is succeeded by Mr. Clarence L. Hay, son of John Hay, a graduate of Harvard and specialist in Mexican and Central American archeology.

COMMITTEES OF THE TRUSTEES

The names of Mr. George D. Pratt and Mr. Cleveland Earl Dodge were added to the executive committee.

Mr. George F. Baker, Jr., was reelected treasurer and chairman of the Finance Committee for the fourth year. He has associated with him on this committee Mr. Felix M. Warburg, of Kuhn, Loeb and Company; Mr. Walter Douglas, of Phelps Dodge and Company; Mr. A. Perry Osborn, of Redmond and Company; also the first vice-president, Mr. George F. Baker. Reappointed to the advisory committee on finance are Mr. Charles E. Mitchell, of the National City Bank; Mr. F. D. Bartow, of the First National Bank, and Mr. Arthur M. Anderson, of J. P. Morgan and Company. The income from the General Endowment Fund has increased $5,000 during the present year through judicious investment by the finance committee.

SCIENTIFIC STAFF

On the scientific staff, Director Frederic A. Lucas, after twelve years' service, retires as active director and becomes honorary director, and acts in an advisory capacity in all the exhibition halls. Mr. George H. Sherwood is promoted to the post of acting director for the period of two years.

MAINTENANCE AND OPERATING EXPENSES

The city administration, appreciating the service that the museum is rendering to the public, and especially its relations to the public school system, provided an appropriation of $342,313.36, which has been applied to the care and upkeep of the building and the maintenance of its educational activities. In the same liberal spirit, the city also appropriated $184,950 for necessary repairs, construction and equipment in the existing building, as well as an additional appropriation of $163,800 for the School Service Building now ready for construction.

The year 1923 opened with an advance contribution of $38,000 by the trustees to meet a prospective deficit of $40,000 in maintenance and operating expenses. Thus the year 1923, through various economies, closed without a deficiency, the total budget expenditure being $967,053.33.

To the minimum budget of 1924 the trustees have guaranteed $55,404.70 to cover the deficiency in a budget of $963,928. This method of meeting the annual budget deficiency by raising it in advance was instituted by Mr. J. Pierpont Morgan ten years ago. It brings about economies which result in closing the year with all bills paid.

GENERAL ENDOWMENT

The present total endowment of $11,591,617.22 includes a number of generous recent contributions, as follows: Mr. George F. Baker, $250,000; Mr. Edward S. Harkness, $100,000; Mr. John D. Rockefeller, Jr., $1,025,000; Mr. J. P. Morgan, $127,187.50; Mr. George D. Pratt, $50,000; Mr. Arthur Curtiss James, $26,750; Mr. Felix M. Warburg, $19,000. This endowment is still inadequate to the amount of $3,000,000 to meet the regular educational, exhibitional and operating expenses of the museum, which have increased 250 per cent. during the fifteen year period, chiefly owing to doubling and trebling of living costs, wages and salaries in the City of New York, which is now probably the most expensive city in the world.

It is estimated by President Osborn that an endowment of $15,000,000 will be needed to operate the museum when the three new buildings—the Asiatic Hall, the Oceanic Hall and the School Service Building, now under construction by the city at a total cost of $3,000,000—are completed.

Highly as the president and trustees value the popular and financial appreciation of the museum, they realize that the museum is very far from being complete at present, that very extensive rearrangement of the collections must be made to bring about an ideal educational arrangement, that we must look forward finally to a permanent endowment fund of not less than $20,000,000, and so equivalent to that of the present endowment of the New York Public Library, in order to care for future increases in public and popular attendance and in the serious educational and scientific work in the schools, colleges and universities of this country.

TOTAL GIFTS TO MUSEUM DURING THE PAST FIFTEEN YEARS

In order to show how gifts and appropriations of the past fifteen years have kept pace with the increasing public service by the museum and increasing cost of operation, the president gave a summary of the financial, administrative and educational development of the museum during this time, leaving the scientific summary of this series of years for the printed report which will appear on May first. The total gifts to the museum during this period have been as follows: From the City of New York, in building and equipment (including the School Service Building to be erected at a cost of $733,800), $3,050,525.54. The

total contributions of members of the board of trustees, under special funds and gifts, amount to $2,895,241.82. The total gifts of members and friends other than trustees during the same period amount to $8,260,476.23. Thus, during the past fifteen years, the grand total of additions to permanent equipment, to building, to exhibition and to the endowment of the museum is $14,206,243.59, an average of a little less than $1,000,000 a year.

INCREASE IN MUSEUM COLLECTIONS DURING 1923

The year 1923 has been exceptional in the rapid increase of collections from all parts of the world. Either an emergency gift of $300,000 for preparation and exhibition or the annual interest on a new endowment fund of $3,000,000 is needed to keep up with this astonishing growth through the museum's expeditions and through the liberality of the city in the erection of new buildings.

First in order of importance, during the year 1923, is the Faunthorpe-Vernay collection from India, including gifts by the Maharajahs of Nepal and Mysore and the Viceroy of India—a superb collection of mammals and birds valued at not less than $100,000. The gifts of trustees and friends of the museum and the Asiatic Society to the third Asiatic expedition total $43,432 for the year, resulting in the great discoveries in Mongolia and in superb collections from China and Mongolia. The museum is also indebted to Mrs. Henry Clay Frick for the gift of a unique collection of fossils from the Siwalik Hills of India and from Burma, of a total value of $15,000. To this Mr. Childs Frick has added during the year $16,300, making a total contribution of $31,250 towards collections, chiefly of Pliocene age, from California and other western states. Mr. Harry Payne Whitney has continued for the third year his annual gift of $20,000 towards a total of $100,000 to secure a representative collection of the birds of the oceanic islands of Polynesia. An indirect gift for the support of the Martin Johnson Second African Expedition by the Martin Johnson African Expedition Corporation, for five years, constitutes an annual expenditure of $100,000.

SCHOOL SERVICE AND ATTENDANCE DURING FIFTEEN YEARS

The corresponding growth of public interest in the museum during the fifteen year period is shown by the increase in attendance from 537,984 in 1907 to 1,440,726 in 1923, an increase of more than 167 per cent. The school service attendance in the museum, included in the above figures, increased from 30,000 in 1907 to 123,756 in 1923, while the total number reached by the museum's extension service to the schools has increased from 778,510 in 1907 to 5,630,811 in 1923, an increase of 623 per cent. The annual membership income has arisen from $15,300 in 1907 to $38,395 in 1923, and the total membership is now 7,350.

SIX NEW EXHIBITION HALLS

An emergency subscription of $300,000 for preparation and exhibition is needed now because the minimum budget of 1924 does not provide for the very important emergency requirement of filling the six new exhibition halls now being constructed by the city, with their respective exhibitions from various parts of the world, namely, the Oceanic Hall, the Gallery of the Oceanic Hall devoted to the smaller marine life, the Hall of Fishes devoted to the fishes of the world, the Asiatic Hall devoted to the splendid new Asiatic collections presented through Colonel J. C. Faunthorpe and Mr. Arthur Vernay, as well as the rich collections of the third Asiatic expedition, the Hall of Amphibians and Reptiles occupying the third floor, the Hall of Giant Ceratopsians occupying the fourth floor.

These six new exhibition halls now being added to the museum by the taxpayers of the city have been constructed at a cost of $1,500,000 after plans gradually maturing since the year 1911, when the present arrangement was decided upon, and promise to be at once the most beautiful and the most impressive museum exhibition halls in the world. They embody all the latest ideas and ideals of museum construction and are receiving the scientific supervision of leading experts like Honorary Director Lucas, Assistant Director James Clark, in charge of preparation; the noted animal sculptor, Carl E. Akeley; the ichthyologist, Bashford Dean (also on the Metropolitan Museum Staff); Roy C. Andrews, explorer and mammalogist; Roy W. Miner, specialist in invertebrate zoology; the herpetologist, G. Kingsley Noble, graduate of Harvard, and the paleontologists, Henry Fairfield Osborn and William D. Matthew.

MARY A. DAY

MISS MARY ANNA DAY, for thirty-one years librarian at the Gray Herbarium of Harvard University, died in Cambridge, Mass., on January 27, 1924, in her seventy-second year. She was born in Nelson, N. H., on October 12, 1852. Educated in the Academy of Lancaster, Mass., she was from 1871 to 1880 a teacher in the Massachusetts public schools. Later she became librarian in the Public Library of Clinton, Mass. She accepted appointment at the Gray Herbarium January 1, 1893, succeeding as librarian of that establishment Miss Josephine A. Clark, who had been called in similar capacity to the United States Department of Agriculture at Washington.