THE MASTODON AT THE BROOKLYN INSTITUTE MUSEUM.

BY PROF. ALFRED G. MAYER.

During the summer of 1899 a skeleton of *Mastodon giganteus* was found upon the farm of Frederick W. Schaeffer, at Newburg, N. Y. This skeleton was purchased by members of the board of trustees of the Brooklyn Institute Museum, and is now mounted and on public exhibition at the Museum building, on Eastern Parkway, Brooklyn.

The skeleton is almost complete, so far as the trunk is concerned, but most of the leg-bones were not found. These have been replaced in plaster or from other mastodon bones.

The skeleton was found about four to six feet below the surface, lying upon the clay bottom of what had been a small pool of water. After the death of the mastodon this pool became partially filled with a layer of peat, having a maximum thickness of about three and one-half feet. Numerous sticks gnawed by beavers were found scattered through this peat, showing that the beavers had lived there long after the death of the mastodon. The peat was covered with a layer of clay and of black loam about two and a half feet in thickness.

There is some reason to suppose that the Brooklyn mastodon died long after the glacial period, but a careful examination of the locality must be carried out by some competent physiographical geologist before any statement to this effect can be made with certainty. The Brooklyn mastodon was an adult individual, and is peculiar in that the tusks curve upward and inward, their outer points being not more than eight inches apart.

In most mastodon skeletons it will be remembered that the tusks bend outward. There are no traces of tusks having been present in the lower jaw. Such tusks are seen in young mastodons, but they were shed at maturity by the females and occasionally replaced by a permanent tusk on the left side in the males.

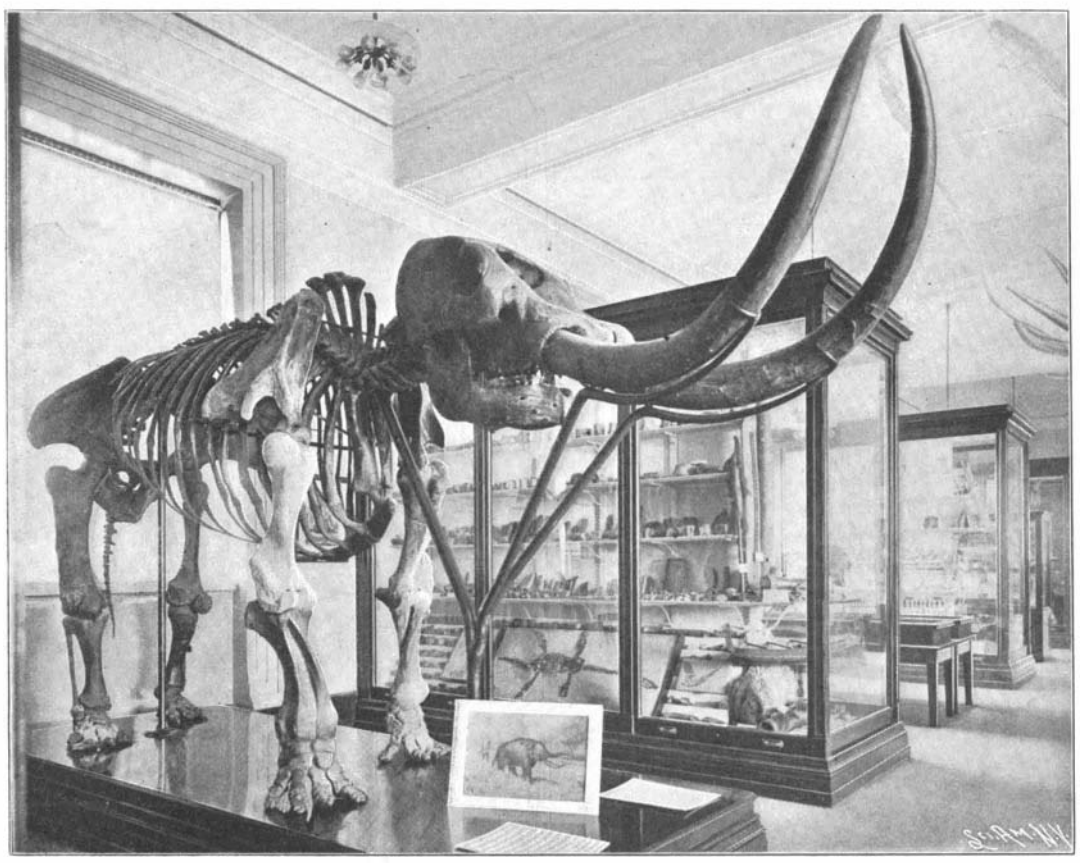
The mastodon was common from Mid-Tertiary times until near the close of the glacial epoch, over the United States, from the Gulf of Mexico northward and from the west banks of the Hudson River to the Mississippi Valley.

It was rare to the eastward of the Hudson, and this river probably proved a barrier to its migrations.

Several good skeletons have been found at Newburg, where they appear to have become mired in soft swampy ground. There is reason to believe that the animal fed upon the twigs and leaves of trees, for half-digested spruce twigs were found in the midst of the ribs of one of the Newburg mastodons.

The mastodon probably presented the appearance of a huge hairy elephant having remarkably long, massive tusks. Although we have no direct evidence, there is some reason to believe that man coexisted with the mastodon in North America.

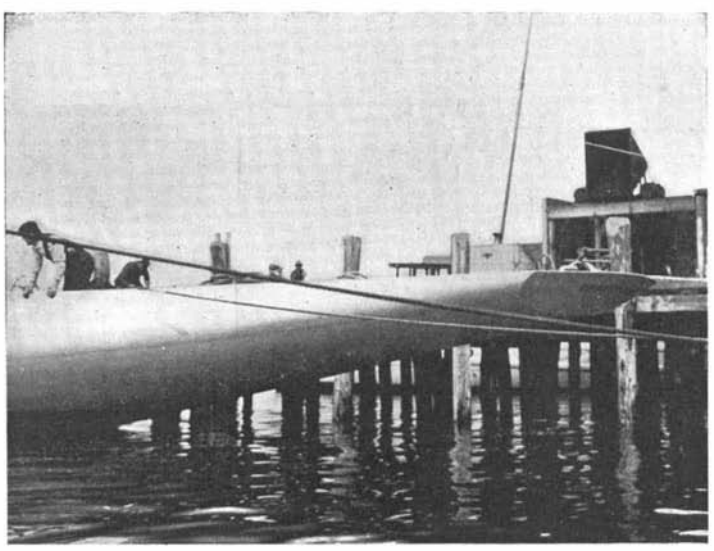
The mammoth (*Elephas primigenius*) lived in North America at the time of the mastodon and probably survived long after the latter disappeared. It is certain that prehistoric man hunted the mammoth in Europe, for numerous remains of carved mammoth bones are found in the caverns of the Vézère and at other places in France. Among these is a rude drawing of the mammoth executed upon a slab of mammoth ivory.



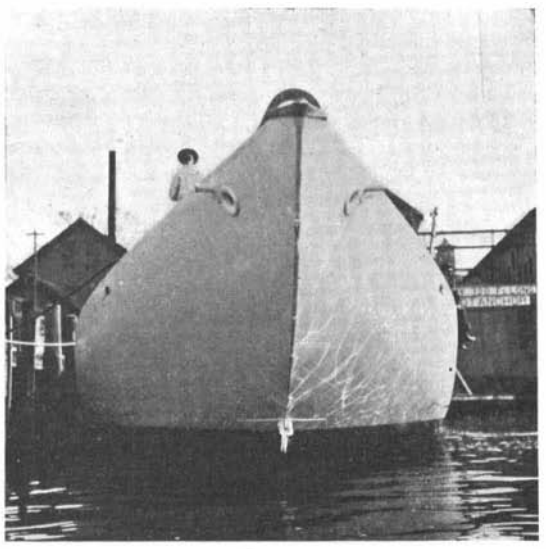
THE MASTODON AT THE BROOKLYN INSTITUTE MUSEUM.

LAUNCH OF THE "CONSTITUTION."

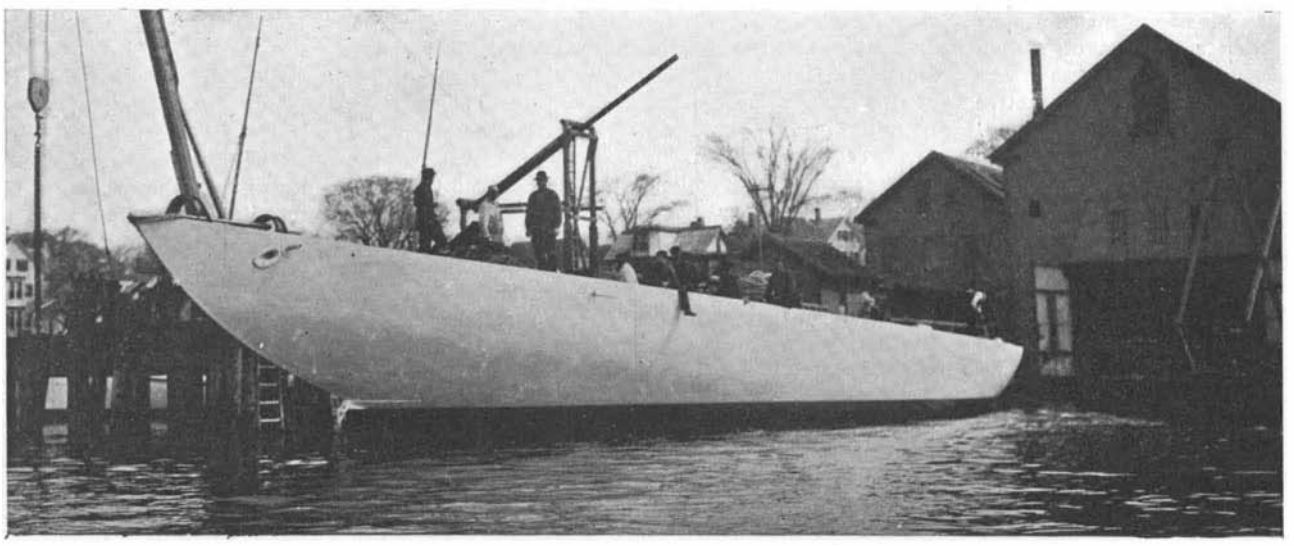
The accompanying photographs, which were taken the day after the launch of the "Constitution," are instructive as showing the difference between "Constitution" and "Columbia," at least in that portion of the two boats that shows above the water-line. In our last issue we gave full plans of the construction of the new boat, and stated that the chief difference would lie in the saving of weight in the hull of the boat, due to the adoption of an entirely novel system of framing, and in an increase of beam by exactly one foot. The dimensions of the "Constitution" are: Length over all, 132 feet 6 inches; beam, 25 feet 2½ inches; draft on normal displacement, 19 feet 10 inches, at which draft the water-line length will be 89 feet 9 inches. In a comparison with the "Independence," which may be taken as representing the most up-to-date construction of the conventional type, it was shown that the longitudinal framing adopted in "Constitution" has resulted in the reduction of the total weight of the plating from 30 tons in "Independence" to 22 tons in the Herreshoff boat. There is also a saving as compared with "Columbia" due to the substitution of a plate-steel deck covered with cork tiling for the relatively heavy wooden deck used in "Columbia." Against this reduction of weights is to be put the fact that the sail-plan of the new boat has been increased by 10 per cent over that of "Columbia," which means that the spars and rigging must be proportionately stronger and heavier, and that the weight of 1,300 square yards of extra canvas must also be added in. The extra weight due to this increased sail spread, moreover, is carried at an average height of 40 or 50 feet above the deck and, therefore, will offset some of the weight saved in the hull plating and deck. Moreover, the body of the boat is larger, and this again will offset some of the weight saved. But even after all is said and done, it is probable that although "Constitution" is a larger and far more powerful boat, her displacement will be about the same as that of "Columbia." The photographs show at once that there is much more boat above the water, her freeboard being from 9 inches to a foot greater than that of her predecessor; in fact, she has such high topsides as to be suggestive in this respect of "Shamrock II." The tumble-home which was so marked in "Columbia" is less noticeable in the new boat. The bow is very lofty and its sections are more round and full, giving the boat a more seaworthy appearance, and suggesting that she ought to make splendid weather of it when thrashing her way to the weather mark against a strong breeze and a lumpy sea. The quarters and stern appear to be deeper than those of "Columbia," and when she heels, "Constitution" will derive not a little sail-carrying power from the modeling of these long and powerful quarters. At the same time we think that, from an artistic point of view, she is scarcely as beautiful a boat as "Columbia," although she will doubtless beat that boat by from 5 to 10 minutes, according to the state of the wind and sea.



THE PORT QUARTER



BOW VIEW.



"CONSTITUTION" THE DAY AFTER THE LAUNCH.

Mr. Charles Davison, a well-known authority on Seismology, contributes an article on "The Progress of Seismology During the Nineteenth Century" to Knowledge. The following is a short extract: "Changes in the amplitude, period and direction of earthquake-vibrations are readily distinguished without instrumental aid; but seismographs have done more than merely add precision to the evidence of our senses. They have rendered manifest features of the earthquake-motion that would otherwise have passed unnoticed. Still more interesting are the revelations of the horizontal pendulum with regard to the pulsa-

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