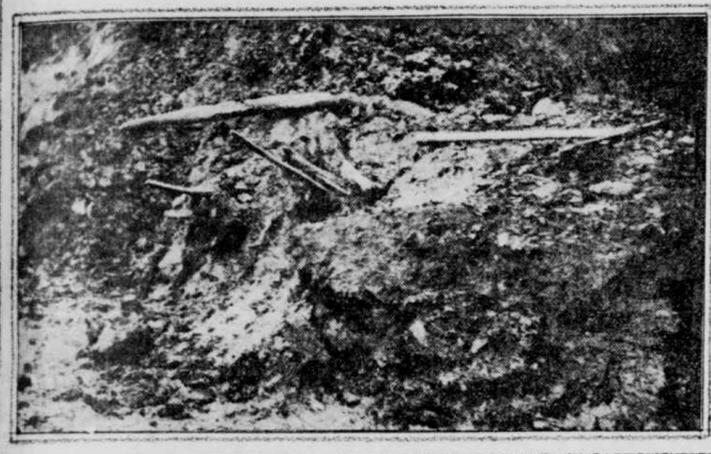


ON TRAIL OF LAST OF THE MAMMOTHS

HE'S PRETTY DEAD BY NOW, AND HIS FINAL LAIR IS SIBERIA'S TOONDRA, WHENCE THE THAWING OF GLACIAL MUD RELEASES HIM AFTER AGE-OLD COLD STORAGE.



A MAMMOTH BEGINNING TO COME TO LIGHT THROUGH THE CRUMBLING OF THE RIVER CLIFF IN WHICH IT HAS BEEN EMBEDDED FOR THOUSANDS OF YEARS. A TUSK IS SEEN PROJECTING FROM A RECENT LANDSLIDE.

By BASSETT DIGBY.

"I SUPPOSE they make the convicts do it!" exclaimed a charming young lady who caught a glimpse of this title. "Some one told me the poor things were let off having to work down in those horrid damp mines some years ago—but I knew there was a catch in it somewhere."

So it may be well to state at the outset that the feckless convicts are not impressed into this onerous pastime. Moreover, hunting the mammoth in Siberia is no longer as dangerous an occupation as it once was, the last specimen of Elephas primigenius having died some scores—if not hundreds—of centuries ago. But it still presents a good many more hazards, inconveniences and perils than, well, golf or duck-shooting, for instance, and the fact that after many thousands of miles' journey through the steppes and forests and swamps of Siberia you may eventually find your quarry in the Arctic toondra of the eternally ice-bound North, standing on his feet—no shriveled, misshapen carcass, but a huge, hairy elephant, in precisely as good condition as on the day of his sudden refrigeration in prehistoric times, is enough to lend a certain amount of vivid interest to the foray.

TERRIFIC FANCIES THAT ASSAIL LOTS OF FOLKS.

The haziest of ideas are in circulation regarding the mammoth, his era, size, habits, food and general behavior. Lots of folks think he was as big as a church, a small church, perhaps, but a church for all that. Lots of folks think that he lived contemporaneously with the enormously long-necked beasts with Latin and Greek names to match; the giant sloth, which ate some forest trees and drank a pond when he needed a 'tween meal snack; the terribly-toothed flying lizards with a thirty-foot wing spread, and similar nightmares of pre-Adamite days. Lots of folks only a decade ago were fooled by a realistic fiction story in a New York magazine into deluging the wise men of the Smithsonian with requests to furnish them with assurances that the wild and woolly mammoths of Alaska would not, one of these days, decide to stroll south and make a nuisance of themselves. Lots of folks imagine the mammoth passed the bulk of his time charging, with lowered head and levelled tusks, at prehistoric men and beasts, with a view to slaying and eating them. Lots of folks—but why prolong the category? With the final denial that the mammoth was the same as the mastodon or the mastodon as the mammoth, let us see this beast as he really was.

NOT ALTOGETHER THE MOST ENGAGING PICTURE.

The Siberian mammoth was one of the latest of many forms of prehistoric elephant. He stood about twelve or thirteen feet high at the shoulder, full grown, but his thick coat of long, coarse, brown hair gave him some more inches and a considerably stouter and more formidable appearance. A naked, close-shaven bear would not look much more menacing, remember, than a farmyard hog; realizing this, you can see how Elephas primigenius's long, shaggy coat launched him fairly well on the road to being a mighty unpleasant-looking beast to encounter.

His ears were much smaller than those of a modern elephant. His hind feet were four, not five, toed. His tail was short. His eye was small. Next his skin, beneath the hair, was a coat of soft reddish-brown wool. In general build he sloped rather more rapidly astern than does the modern elephant.

The most prominent and awe-inspiring part of his make-up, however, was the pair of huge tusks that jutted from his jaws. They were spiral, curling up and pointing back after describing almost a complete circle. In many instances they did actually make a circle; in some instances they made a circle and came curling back in the first segment of a second circle. In a few adult cases, and in many

young mammoths, the tusks had only a slightly more curved tilt than those of the modern Asiatic elephant.

These tusks naturally varied a good deal in size and weight, according to the owner's age at death. A length of nine to twelve feet along the outer curve was nothing unusual. Such a tusk often measures about two and one-half feet around the base and weighs 180 or 200 pounds. The general run of equatorial African elephant tusks coming to market nowadays turn the scale at about forty or fifty pounds; so you see the mammoth was pretty heavily ivoryed.

A good many wise men have lost themselves in a slough of puzzlement over wondering why this prehistoric elephant was blessed with this ostentatious dental array. What could he have done with them?

Another of your illusions must be shattered right here. The mammoth didn't chase our ancestors and eat 'em. He led a blameless life—never injured a lamb. Mammoths fed on leafy branches of trees, pine and fir and willow, any succulent mouthful of arboreal greenery he happened across. He ate wild flowers, too. When he felt hungry he lumbered along, culling bunches of posies. Like Nebuchadnezzar, he ate grass. Like a barbarian, he ate wild thyme. Like the young men who got out "The Yellow Book," he ate poppies. He ate—oh, sublime bathos!—pretty yellow buttercups. Seeds or other recognizable parts of them have been found in the crevices of his teeth and in his refrigerated tummy.

INTO THE FOG: THEORIES THICKEN AND PALEONTOLOGISTS MULTIPLY.

The Indian and African elephants of to-day often kneel and dig up young trees and bushes with their straight, sharp tusks, which are admirably adapted to the practice. And they dig for water in the sand of sun-dried water courses. The mammoth's spiral tusks were useless for such utilitarian exercise. Moreover, it seems very probable that for some thousands of years—tens of thousands, perhaps—toward the end of his era, the mammoth came south to the shelter of the forests for eight months in the year. In the matted northern jungles and thickets of the world's northerly forest zone his enormous tusks must have been the acme of nuisance. In brief, no plausible theory has been advanced for his tusks. They appear to have been a case of sheer art for art's sake.

What sort of a world, you ask, was Mother Earth in the mammoth's day, who were his playmates, where did he live?

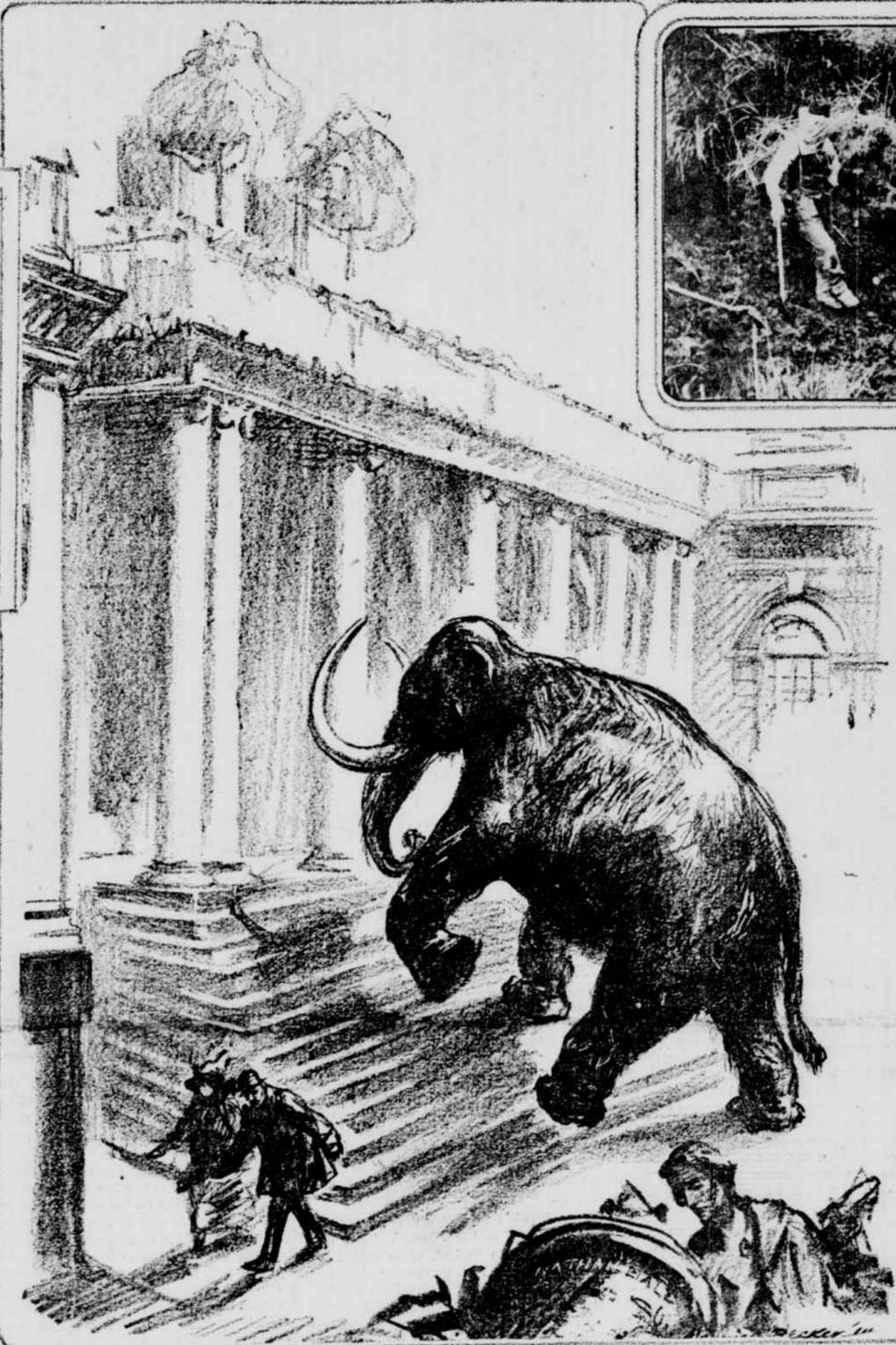
Now the fog is liable to thicken.

Mammoth is a loose term—a corruption of a French corruption of a Russian corruption of a Siberian Tartar word, "mama"—that can be, and is, applied to several forms of prehistoric elephant. There is the huge Imperial mammoth, whose American stamping ground was from Nebraska south to the City of Mexico. There was the Columbian mammoth, whose remains are found from the latitude of Washington, D. C., to Mexico. There is the South mammoth, who haunted the south of Europe. There is a mammoth whose bones are found in the Sivalik Hills, in the north of British India. And nearly every paleontologist who takes himself seriously adopts some mammoth find or other and avers, in the face of ridicule, scorn and obloquy, that Elephas Bill or E. Petey or E. Si was a separate species, an exclusive kinder cuss who had nothing to do with the others, and proved that so-and-so and so-and-so was so-and-so, and not, on any account, so-and-so.

ON THE TRAIL OF THE SIBERIAN MAMMOTH, LAST OF HIS RACE.

However, we are not going to consider here all the tribe of mongrel and disputed mammothdom.

Let it be understood that our term mammoth applies to the Siberian or Hairy Mammoth, Elephas primigenius, probably last of his race and the only mammoth found nowadays in the flesh. All that remains of the other mammoths is rare finds of bones and



DIGGING OUT A MONSTER.



Photos by courtesy American Museum of Natural History.

A TUSK.

portions of bones, and, very occasionally, a tusk or two.

The Siberian mammoth ranged pretty freely over the Northern Hemisphere in the Pleistocene Age; that is to say, the era just before the Glacial Period, during the Glacial Period and shortly after it. He died out quite recently, from 20,000 to 150,000 years ago. In America he wandered between Washington, D. C., and Alaska—and Alaska in those days was joined to Siberia by a bridge of solid land where the Bering Strait gashes apart the Old and New worlds to-day. All Europe was his stamping ground. In those days he could walk over there from New York, via Greenland, Iceland and Great Britain, all of which were an unbroken stretch of land, as were the North Sea and the Strait of Dover. The fishermen trawling the bottom of the North Sea bring up his teeth by the thousand.

FELLOW CREATURES THAT ENLIVENED ANCIENT DAYS.

Apart from the woolly rhinoceros and certain huskier ancestors of modern beasts—the cave bear, cave lion, cave hyena, a large banded sloth and a few others—the fellow creatures of the mammoth were all beasts and birds familiar to the modern naturalist. Along with one of his skulls found in the sandy shore of Silver Lake, in the Oregon Desert, by Sternburg, were bones of herons and coots, swan and geese and duck, grouse and eagle and great horned owl, blackbird and raven, flamingo, llama, horse and dog, otter and beaver, and mice.

Ubiquitous as was primigenius in northern latitudes, his headquarters, his great stamping ground, was the north of Siberia, and it is in Siberia that he has been sought by ivory hunters for centuries beyond number.

Siberia is, nowadays, a region of three distinct kinds of land, stretching in three parallel broad belts from Russia to the Pacific. In the south is a belt of rich black earth steppe, the finest agricultural prairie land, two or three hundred miles broad. North lies a belt of impossible swamp and forest, four or five hundred miles broad. Then the arctic cold tightens its grip and trees dwindle into starveling saplings, and starveling saplings dwarf down to scarcer and scarcer patches of knee-high willow and stunted larch. Soon there is nothing but a naked, moss-clad bog fading in horizonless sweeps to

the distant shores of the Arctic Ocean—the Siberian toondra.

THE ETERNALLY FROZEN TOONDRA—A MONOTONOUS PURGATORY.

The toondra is eternally frozen. For three months in the summer the surface snow melts, two or three feet of the outer skin thaws, and the featureless sea of snow is transformed into a dull olive expanse of lichen and moss, flecked here and there with a stunted plant—monotony of monotony to behold and purgatory of purgatories to traverse, for the bog is all but impassable and mosquitoes hover in dense swarms around every stirring creature. Even the reindeer flee it till the August frosts usher in the winter.

This toondra is one vast sepulchre of the mammoth.

Swollen by the flood water of mild summers, the creeks and rivers of the northward tilting top of Asia spill their swirling torrents seaward, scooping out acre upon acre of bog-bank at every bend in their course. And out with the glacial mud and freshly thawed prehistoric silt com: the entombed mammoths, from their age-old cold storage. Actual water contact does not account, though, for all the exposures. Cliffs, river bluffs facing south, thaw and crumble a few inches every summer. Nearer and nearer the surface comes the imprisoned monster.

FROM 1870 TO 1936—THE BIRTH OF A FROZEN MAMMOTH.

One warm day in August, 1870, down topples a thawed clod or two. Just the tip of a tusk appears. Eighteen hundred and seventy-one and 1872 have cold, sleety summers. Even the mild run of summers from 1873 till 1879 not bring down more than a mere trickle of soil. In 1880 quite a little landslide denudes the bluff. Now eight inches of tusk appear. In 1887 the tip of the second tusk peeps out. By 1902 out just a couple of feet of tusk. By 1930, perhaps, the brute appears as a basso-relievo. Next year a wolf-pack chances that way, rips off and tramples into the mud some bushels of the long, shaggy hair on his legs, and nibbles them. In 1935 a polar bear samples him, and in rending his pliant limbs loosens the soil so much that in 1936 he has become an alto-relievo on the face of his cliff. Three or four years later he topples right out, with a great thud and a rattle of cascading pebbles—and, very properly, nearly scares the life out of the little flat-faced yellow man who wanders that way a few days later.

These Samoyedes, cousins of our Esquimaux, don't trust the mammoth. Sophisticated enough by the promise of gold to summon up courage sometimes to approach and saw off his tusks, they live in fear and trembling of a day of reckoning. A substantial percentage of their gains from the sale of the tusks goes to the Shaman, the witch doctor, for high grade incantations, petitions and sacrifices to the Burkans who live on high.

THE LITTLE SAMOYEDE KNOWS IT IS A GIANT BURROWING RAT.

It is no use assuring a Samoyede that the mammoth is very dead. Any Samoyede in his right senses knows that the mammoth is a giant burrowing rat, who may pop up some night right under your tent and devour the family as preliminary hors d'oeuvres to a real meal, but, whenever a mammoth comes tunnelling to the surface by day and sees the sun, he promptly dies. Have not Samoyedes by the score seen mammoths stricken dead in the very act of emerging from the earth? What further proof is needed, they ask.

In Northeast Siberia, where earthquakes occur, they are attributed by the natives to the not unnatural tremors that would be caused by a herd of these gigantic rats tunnelling at high speed near the surface of the earth.

Many and ingenious are the theories for the mammoth's disappearance from Siberia; each authority is quite convincing, too, until you come within earshot of the still small voice of yet another scrap of data which promptly demolishes his dictum.

It seems pretty certain, however, that Siberia was warmer in the mammoth's early days than either toward the end of his era or to-day. The plant and tree remains in the Verkhoyansk Mountains, and on other high ground in the toondra belt, almost devoid of vegetable life to-day, indicate that.

PREHISTORIC UPHEAVALS WROUGHT EXTINCTION OF MAMMOTH.

The consensus of scientific opinion to-day holds that an immense Asiatic Mediterranean Sea—the Hyrcanean Ocean of pre-Roman tradition—once extended from the Black Sea up through Turkestan and Siberia to the Gulf of Obi, on the Arctic Ocean, and that a terrible cataclysm of nature elevated its bed, tore asunder surrounding hills and mountain chains, and, in the course of a few centuries

drained it all dry. The consequent effect on the temperature would have changed the climate of Asia and lowered its temperature considerably.

This terrible period of earthquake and volcanic eruption, of sea bed turning to hill and hill to lake, would almost certainly have wiped out countless herds of mammoth. And the rapidly intensifying cold would have completed the work. This seems to me to be the most likely way the mammoth became extinct, in Siberia, at all events.

It is held in some quarters that man hunted him to extinction. But the fact that scarcely a human bone and never a refrigerated human corpse is found near the myriads of mammoth bones and quantities of refrigerated mammoth corpses does not point to men having been plentiful enough to do him much harm, though in at least one spot in Russia (near Nijni Novgorod), and on the bank of the Ob, near Tomsk, human and mammoth bones have certainly been found together. Many finds of contiguous human and mammoth bones have been made in Belgium, France and England, but there is not a single instance in North America to indicate even that man and mammoth lived synchronously.

PROCRASTINATION WAS FATAL IN THOSE DAYS, TOO.

Professor Geikie's theory was that mammoths perished one by one, by sinking into shrunken mudholes in the toondra, pitfalls that were concealed by a tangle of snow-covered lichen and moss. This undoubtedly was the death of many individuals, but it was hardly enough of a menace to wipe out the species. Another (apparently serious) authority assumes that the mammoth went through thin spots in the early fall ice, a herd at a time, till at last there were no more.

Professor Bell ingeniously suggests that the mammoth's incapacity to overcome the inertia of a long-established habit led to his downfall. In other words, having got, by centuries of inherited instinct, quite satisfied with staying till late fall, on the far northern toondra, primigenius warn't goin' to hurry himself for no glacial period or draining of the Hyrcanean Ocean or nuthin', goshdurn him if he would! On and on crept the cold, more and more intense. Year after year more and more herds stayed north later in the season than was wise, and, having their food cut off by premature frosts and heavy snowfalls, perished of starvation before they could get down south to the forest zone, till at last all were dead.

And that theory can be demolished by any one of four replies.

No. The only way to account for the mammoth's disappearance from Siberia is to assume that the joint agency of the series of earthquakes, volcanic eruptions and disturbances of the earth's crust, and the ensuing intensification of cold did it. Almost simultaneously—at the close of the Paleolithic Age—there were extraordinary geological convulsions in British India, in the Mississippi Valley, in Montana, Idaho and Colorado, in the American and Canadian Rockies and in Alaska. These latter births, deaths and juggings of mountains may have been one of the most significant agencies in wiping out the Siberian mammoth in North America.

(The next article deals with the experiences of men who have seen the Siberian mammoth in the flesh.)