

SCIENTIFIC AMERICAN

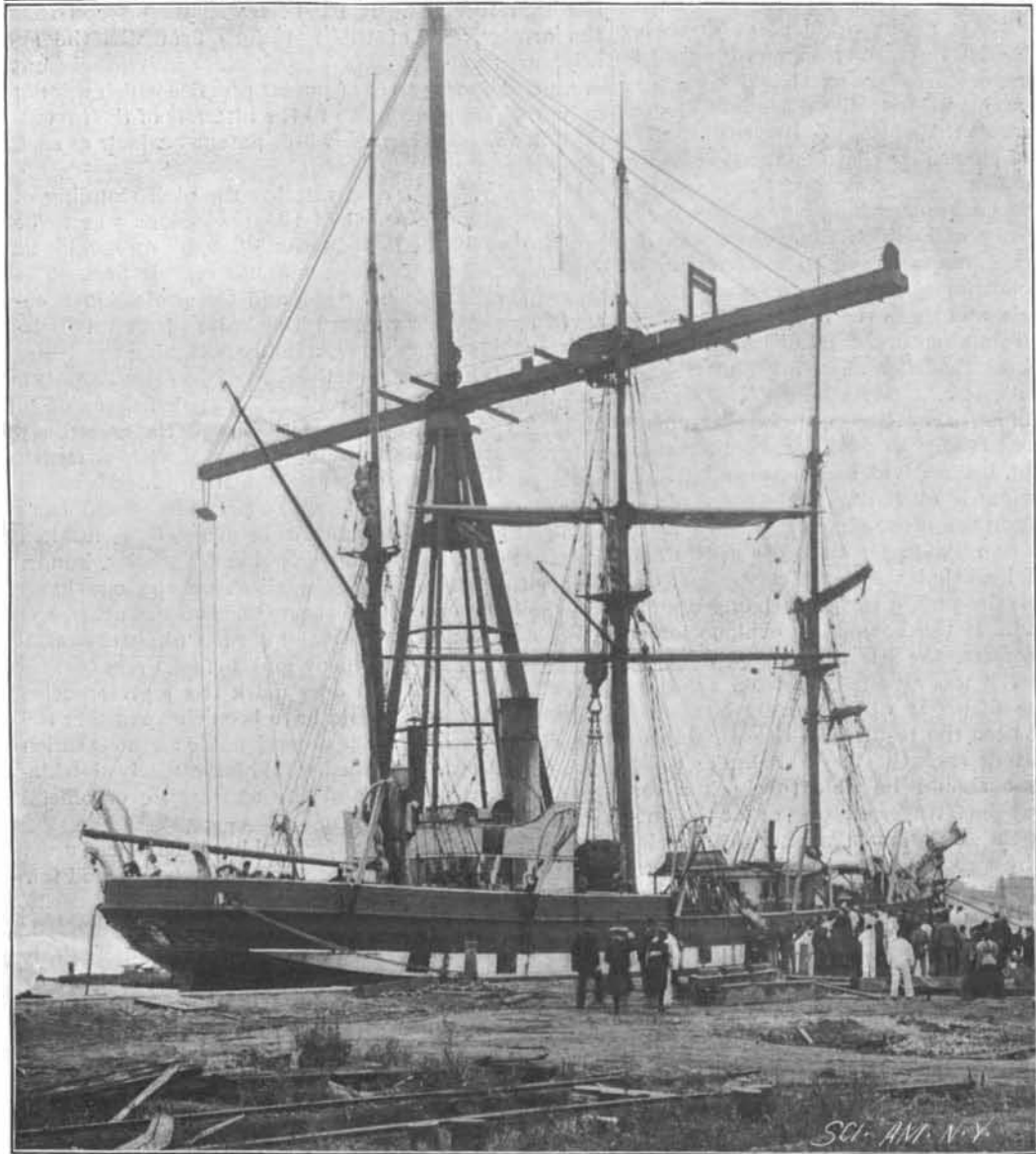
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LANDING THE GREAT METEORITE FROM THE "HOPE" AT THE BROOKLYN NAVY YARD.



ESQUIMAU DOGS.

THE RETURN OF THE PEARY EXPEDITION.

The latest Arctic adventure of Lieut. R. E. Peary, C.E., U.S.N., while devoid of sensational adventures and discoveries, was crowned with entire success from a scientific point of view, and this success will materially strengthen the interest with which his future work will be regarded. He has shown conclusively that his ideas and methods of Arctic exploration are eminently sane and practical and entirely free from the theatrical. The great meteorite and the collections he gathered are worth all the expense and labor of the voyage, and the scientific world is in his debt for the pains he took in securing them.

In his last expedition no attempt was made to reach a very high latitude. The idea of the expedition being to establish a principal base of supplies from which the explorers could start next season.

The Hope came into Sydney, C. B., on September 20, burning her (Continued on page 249.)



ESQUIMAU MAN AND BOY.



RAISING THE GREAT METEORITE FROM THE HOLD OF THE "HOPE."
THE RETURN OF THE PEARY EXPEDITION.

THE RETURN OF THE PEARY EXPEDITION.

(Continued from first page.)

last ton of coal and with her bulwarks smashed. The vessel was nearly as deep in the water as when she left the port for the North, the great Cape York meteorite, the largest in the world, being in the hold embedded in tons of ballast. Important ethnological collections were made on the trip, and the party visited Cape Sabine and procured relics of the ill-fated Greely expedition. The various parties which had been left at different points on the way North were taken on as the steamer came southward. The summer in Baffin Bay was marked by almost continuously stormy weather and an unusual scarcity of ice. The Hope coaled at Sydney and proceeded to Brooklyn, N. Y., where she was on exhibition a couple of days at the foot of Dock Street, a small admission being charged, the proceeds going to swell Mr. Peary's exploration fund. The Hope bore the marks of her tussle with the waves and ice of the Arctic seas.

Through the kindness of Mr. and Mrs. Peary, the special photographer of the SCIENTIFIC AMERICAN was enabled to obtain some very interesting views of the six Esquimaux and their three dogs, as well as the work of raising the great meteorite from the hold of the Hope. The Esquimaux are six in number and are named as follows: Keshu and his son Mini; Knu-psu and his wife Antungna and their children Wekshak-supsa, a boy ten years old, and Ahwea, a girl thirteen years old. They are rather stolid, patient and pleasant looking people, but they were uncomfortably warm in their close fitting suits of sealskin. The mother of the children is forty-seven years old and is not four feet high. She held a little reception in the bow of the boat and smiled pleasantly as she shook hands with visitors. The whole party was quartered there, little tents of skins being erected for their shelter on deck. These Northerners have brought three of their Esquimaux dogs along to keep them company.

These Esquimaux belong to a race of Arctic highlanders which have proved themselves very useful to Mr. Peary in the past. Visitors were greatly interested in them and brought them presents of fruit, candy, peanuts and the like, and at last, on the afternoon of October 1, the heat became so great that they were obliged to deny themselves to visitors and retired into the hold, where they dressed with a freedom entirely of the Arctic circle. The male is distinguished by wearing short leggings, and their finger nails are pure white, as may be seen from the engravings. The Esquimaux will assist Mr. Peary in arranging his collections.

The Hope was towed to the Brooklyn navy yard on October 2, and the great meteorite was removed from the hold. Our engravings show the Hope lying at its dock with the crane near it and the actual raising of the meteorite through the hatchway. The meteorite is about 12 feet long, 8 feet wide and 6 feet thick. It is variously estimated to weigh from 45 to 90 tons and is the largest known meteorite. It is composed of about 92 per cent iron and 8 per cent nickel. In appearance it is a bluish black and it needs a close inspection to disclose its metallic nature. Sir John Ross heard of the meteorite on his trip to Cape York in 1818. Half

a century ago, when Inglefield returned to England after exploring along the northwest coast of Greenland, he reported that the natives in the region of Cape York tipped some of their weapons with a metal resembling

something supernatural about it. They have never thought of damaging it, although it has been in their power to do so. Truth to tell, I first heard of the meteorite from the Esquimaux, who excited my curiosity by telling me of an enormous stone that lay on the coast, having been thrown there by some god or other."

The meteorite was found on the northern shore of Melville Bay, on the west central coast of Greenland, not far from Cape York. When Mr. Peary found the meteorite, in 1894, all that could be seen of it above the surface was a little of its top. After studying the problem for some time, he concluded he had not the appliances with him to load the meteorite. When he went north last spring he took with him a number of hydraulic jack screws, having determined that the meteorite should be moved to a point where it could be loaded by means of these hydraulic jacks. The meteorite lay only a short distance from the shore, and when the Hope anchored in Melville Bay the crew, armed with pickaxes and spades, went ashore and began digging about the meteorite. At a depth of about seven feet they reached its lower surface, and, having exposed it on all sides, the hydraulic jacks were brought out, the tackle made ready and the great mass of iron slowly moved to the shore on skids. Getting the meteorite into the hold of the Hope entailed a good deal of arduous labor and risk. Beams were stretched from the bulwarks of the ship to the meteorite and tracks laid thereon. By means of hydraulic jacks it was forced up the track to a point where gun tackles were utilized, when it was lowered into the hold. Here it was surrounded with sand ballast and propped with twelve inch beams. The work took five days, and every man of the crew was pressed into service to accomplish the task. The ship had to be lightened as much as possible, so that with the enormous mass of metal she might make the return voyage in safety.

The Hope was towed to the Cob dock, in the Brooklyn navy yard, and the meteorite was removed by the big government derrick, which is capable of lifting 100 tons. The meteorite was placed east of the receiving ship Vermont, where it will remain until Lieut. Peary decides what he wishes to do with it. The meteorite lay on a timber platform in the vessel's hold, amidships. The platform was bolstered up by stone ballast. It was constructed of four heavy timbers, without flooring. Enough ballast was removed from beneath the meteorite, just inside the cross pieces connecting the ends

of the two longest timbers of the platform, to permit the two chains to pass under the mass and be connected. Then the winding engine was started and the meteorite began to rise slowly out of the hold. The meteorite was swung clear of the ship by the crane, and was at last deposited on terra firma.

The work was watched by five or six hundred people, many of whom had journeyed long distances to the navy yard to see the great meteorite removed. The work was done under the charge of Capt. Melville. The great floating derrick was moored alongside the Hope at 9:30 in the morning, and at 12:30 the meteorite had been deposited on the Cob dock. Lieut. Peary was an interested spectator, and is seen near the meteorite.

Lieut. Peary



ROBERT E. PEARY, C.E., U.S.N.

iron. These natives, when asked where they got the metal, replied that it came from some great stones. Inglefield became greatly interested in this information, but his efforts to locate the stones were futile. Other explorers tried, but they also failed. But it was not discovered until found by Lieut. Peary four years ago. He says: "I do not wonder that the ignorant natives of that hyperborean country looked upon the strange object with awe, believing that there was



GROUP OF ESQUIMAUX ON BOARD LIEUT. PEARY'S SHIP "HOPE."

spoke of his future plans as follows: "In addition to securing the meteorite, I laid the plans for next year's expedition, and when I leave again, which will be about the end of next July, it will be to remain up there until I reach the pole or lose my life in the attempt, if it takes five years to accomplish this object. The Hope might be strengthened so as to answer our purposes, but I must now have my own vessel. The Hope has only been chartered, and it will be a question of terms whether we go in her or not.

"Next summer I shall take my vessel up to Sherard Osborne Fjord, and make that place my base of supplies.

"On the last trip I made arrangements with the Arctic highlanders, a tribe of Esquimaux, consisting of 230 men, women and children, known as the most northerly tribe of human beings on the earth, to put in this coming winter obtaining bear, seal, and deer skins for our clothing, and in securing all the walrus meat they can for dog food. I have singled out eight young men of the tribe, with their wives, canoes, dogs, sledges and tents, to accompany me to Sherard Osborne Fjord, which is about 300 miles further north than their present abode.

"My party will consist of a surgeon, possibly another white man and myself; the rest will be Esquimaux. The latter know how to drive dogs, they can go hungry, and know how to get food.

"The conditions under which I shall make the coming expedition are of the most satisfactory character. The American Geographical Society has assured \$150,000 to meet all expenses, and I have been given five years' leave of absence. I shall probably buy a new ship for next year, though we may use the Hope again. Mrs. Peary will not accompany me.

"I am quite sure that I shall succeed in reaching the pole. Nansen got within 260 miles of it, but Andrée did not have one chance in a thousand when he started to drift over the pole. I do not think Andrée will accomplish anything, and may have lost his life long ere this in his attempt."

The Stigmata of Degeneration.

Scientific writers of the Lombroso and Nordau type have reached conclusions, we think, says the Alienist and Neurologist, too radically adverse and illogical against the mental stamina of the present generations of men, from their so-called "unerring evidences" of the stigmata of degeneration.

Nordau is perhaps excusable because of his vocation as a newspaper man and amateur scientist, being naturally enough trained to sensationalism, but the extremely pessimistic outlook which Lombroso's inadequate and uncritical comparisons offer is scarcely pardonable in a real votary of exact science, and the aim of all scientific writers who claim public attention to their writings should be absolute, unimpeachable fidelity to nature and the rules of logical deduction in all of their observations and conclusions.

Not to enumerate all of the many signs of cerebrospinal degeneracy these writers dwell upon, we here only mention diminutive stature, deformities of body, supernumerary and deficient members, malformations and asymmetry of the cranium and face, malformations and premature decay of the teeth, too early baldness and gray hair and, paradoxical as it may appear, excessive growth and quantity of the hair, etc., though the latter and each and every evidence above given may be and often is a real evidence of individual or racial decadence, but they are not invariably nor always so.

The value of Lombroso's observations and Nordau's testimony against the neuro-mental integrity of the human family of to-day—the value of their testimony in the direction of organic degeneracy, depends upon many considerations. Conditions of nutrition and strength even of the strongest endowed organisms depend upon the influence of environment as well as of heredity. To be normally resistive without undue decay, to have what might be termed pendular power of going or falling back only to a certain defined limit, to have due expansibility and contractility, to bend like the well strung and tempered bow, but not to break under severe stress of environment, is to be neurotically normal.

To break under more than ordinary strain is not to be unduly defective.

But to break under ordinary stress of environment is to be neuropathic.

To let the teeth and hair go prematurely under such overpowering influences as an overmastering sorrow or bereavement or peculiarly unbearable reverse of fortune or unusual stress of toxic disease, coupled with neglected inadequate medication and undermining environment, such as would in other natures destroy the integrity of the brain and overthrow the reason, is a sign of strength rather than of weakness. Nature in such organisms throws off the superfluities like a gladiator or a man-of-war in action and holds on to the essentials. They come out of the battle of life scathed in these cosmetic appendages, but essentially sound in their central organisms.

Under great stress of study and the persistent goad-

ing presence of an overweening ambition, coupled with a sedentary life, we often see the descendants of great brained and bodied ancestors diminish in stature but maintain the ancestral brain power in frames reduced in size only.

The jewel is there. The casket is good though smaller and will often reappear enlarged to the normal ancestral proportions in descendants from whom the pressure of severe study and sedentary life in the developmental period of the bony frame is withheld.

This is the normal neurotic resiliency of neurally healthy families, and where it exists the individual or family is not necessarily degenerate, and where this regeneracy in a race or people is not destroyed the race or people cannot rationally be said to have become degenerate.

Pessimistic anthropological writers like Lombroso and Nordau do not give adequate logical weight to the inherent neurotic resiliency of normal organisms. With them all apparent are real defects and all are entailed without physiological attainment in subsequent generations.

History gives us patent proof of the fallacy of some of the false anthropological reasoning that has lately set the world to lamenting the degeneracy of the race.

For instance, Byron's hat was too small for the head of any of his contemporaries, and though he compromised his growth during the developmental period and became dwarfed in consequence, there is no evidence of degeneracy in Childe Harold, but of mental power which should have been allowed more years in maturing. His brain and its premature use and development shattered his frame as a large boiler and engine would a steamboat too small and delicate for its power.

And the animalism of a remote ancestry reappeared in some of his moral derelictions after the inhibitions of his better nature had been undermined by disease resulting from a premature and excessive strain of brain and goad of ambition. His poise was disturbed, but cause enough existed to change physiological into pathological.

We gage our great men too severely when, under great mental stress, such as entirely destroys ordinary men, they reveal some long ancestrally repressed weakness or morbid peculiarity.

Some years ago, when I was in Washington, circumference hat measurements at a certain Washington hatter's were taken by an enterprising reporter scientifically inclined like Max Nordau, the newspaper man who wrote "Degeneration" in a fit of pessimistic sensational despondency. These measurements included the head covering and showed the circular dimensions and peculiar conformation of the heads of Benjamin Butler and his colleagues in Congress and the janitor of the Capitol. Senator Dunn, of Indiana, had a circumference hat measurement of six and five-eighths just above the ears, but very symmetrical. Butler's head was "bumptious," asymmetric, as was the majority, large or small, of the members' heads, while the colored janitor's head showed best of all for symmetry and size in these measurements. The story the hatter's conformator tells of its record of the inequalities and irregularities of distinguished heads would astound Lombroso and confound his asymmetry conclusions. Yet there is a logical use for asymmetry in determining the question of mentality.

But the duality of the brain as shown in the cerebral hemispheres first announced by Wigan and later by Brown-Sequard, and the vicarious power of the lobes and convolutions under certain stress of imperative necessity, first announced by myself as early as 1872, is something like the vicarious and substitutive power of the right and left hands when, under certain circumstances, the one the individual is accustomed to use is destroyed or disabled.

As man is ordinarily naturally right handed, so he is usually left brained, using the left hemisphere almost exclusively for thinking, the center of active speech being on the left side in right handed persons. Yet he can by proper and timely training become ambidextrous in the hemispheres of his brain as in his limbs.

The loss of the hair and teeth and the arrest of skeletal development under great brain strain is sometimes Nature's conservative process as regards the brain's integrity, so that neither of these signs is always significant. Were skeletal development and stature the test of mental power, where are we to place the little corporal who became the greatest general of his time, who remodeled the map of Europe, placed kingly crowns on the plebian brows of his family and defied and made servile even the mighty hierarchy of Rome? He was never equaled as a military strategist, and only lost at Waterloo when the power of Great Britain was thrown in the balance against him with the aroused antagonism of Europe and an accident of dereliction, as a trusted ally failed him at a critical moment, when his fate was sealed by the delay, if not delinquency, of Grouchy. True he became a degener-

ate, had epileptic spells and died of cancer, but so did Thomas Benton, of Missouri, die after thirty years in the United States Senate, a giant among the mentally great of stature in Washington, and so died General Grant after he had saved the Union and a worthless financial confidence man had buncoed him and wounded his high and noble spirit beyond mortal endurance, as St. Helena broke the spirit of Napoleon, and made him a prey to ills of the flesh he had escaped when with his victorious legions he was master of Europe.

And just here is one of the potent causes of degeneracy. Great shocks and strains of the nerve centers of the great weaken resistance to agencies that cause disease.

Douglas and Greeley and Blaine died not long after disappointing defeats, and the strain of premature study took several cubits from the otherwise predestined stature of Pope and Young, the latter filling an early grave from consumption, while Aaron Burr, with a nervous constitution built to stand any storm, withstood political failure, disappointed ambition and merited contumely with the stoicism of a Benedict Arnold, as Job endured his calamity with the moral heroism of one proud of his integrity and conscious of having preserved it.

In estimating the value of teratological defects it is important to consider all causal conditions before making a final estimate. Contracted pelvis and instrumental deliveries should be estimated as would a club foot, which may be mechanical or developmental as in true talipes, or as in the foot of a Chinese upper-class belle, the stigmata of degeneracy being in the latter instance in the mental make-up of the parents and the people who countenance the torturing deforming procedure developing it.

Health "Don'ts."

Don't neglect your house drains, nor the drainage about your house. The first condition of family health is a dry and sweet atmosphere. With dry walls, a dry cellar, and drains that carry off refuse without letting in foul gases, half the battle for good health is won.

Don't let your wells or springs be infected by drainage or from other causes. Pure drinking water is indispensable for health at home or anywhere.

Don't keep the sun out of your living and sleeping rooms. Sunlight is absolutely necessary for a right condition of the atmosphere that we breathe and for our bodily well-being.

Don't sleep in the same flannels that you wear during the day.

Don't wear thin socks or light-soled shoes in cold or wet weather.

Don't catch cold. Catching cold is much more preventable than is generally supposed. A person in good physical condition is not liable to colds, and will not fall victim to them unless he is grossly careless. Keep the feet warm and dry, the head cool, the bowels and chest well protected; avoid exposure with an empty stomach; take care not to cool off too rapidly when heated; keep out of draughts; wear flannels; and with the exercise of a little common sense in various emergencies, colds will be rare. If colds were a penal offense, we should soon find a way to prevent them.

Don't neglect personal cleanliness, but use the bath with moderation and in accordance with your general health. The daily cold bath is right enough with the rugged, but it is a great tax upon the vitality of persons not in the best health, and should be abandoned if the results are not found to be favorable, and tepid water used instead. Each man in these things should be a judge for himself; that which is excellent for one is often hurtful for another.

Don't have much confidence in the curative nature of drugs. The above is from the Phrenological Journal, which adds: Remember that Dr. Good Habits, Dr. Diet, and Dr. Exercise are the best doctors in the world.

International Congress of Naval Architects and Marine Engineers.

This congress, convened by the Institute of Naval Architects of Great Britain at London on July 6, was attended by representatives of thirty-eight countries and institutions of Europe and the Americas.

It was opened by his Royal Highness the Prince of Wales, assisted by the Duke of York, the First Lord of the Admiralty and Earl Hopetoun, the president of the Institution. After the reading and discussion of the several papers which were submitted, the congress adjourned on the 10th inst. following and the members were conveyed by special train to Southampton, Glasgow, Greenwich, Dumbarton and Newcastle, where the various ship yards and engine shops were visited. Among the representatives of the American Society of Naval Architects was our old friend Mr. C. H. Haswell, who is still hale and hearty, despite his eighty-eight years.

AUSTRIA, with Hungary, had 5,737 miles of railroad at the end of 1896. The gross revenue was \$52,000,000, the working expenses \$35,000,000, and the net revenue \$17,000,000 on an invested capital of \$570,000,000.