On Stone by W. R. H. H. H.

Polar Bear

From Nature by J. W. Audubon

Lith. Printed & Col. by J. T. Bowen, Phil.

GENUS URSUS.—LINN.

DENTAL FORMULA.

$$\text{Incisive } \frac{6}{6}; \text{ Canine } \frac{1-1}{1-1}; \text{ Molar } \frac{6-6}{7-7} = 42.$$

Head, large; body, stout, and covered with a coat of thick hair; ears, large, slightly acuminate.

Legs, stout; five toes, furnished with strong curved claws, fitted for digging.

Tail, short; mammæ, six, two pectoral and four ventral; no glandular pouch under the tail.

Omnivorous, nocturnal, but frequently seen wandering about during the day.

The generic name is derived from the Latin *ursus*, a Bear.

Eight species of this genus have been described, three existing in Europe, one of which, the Polar Bear, is common also to America, one in the mountainous districts of India, one in Java, one in Thibet, and three in North America.

 URSUS MARITIMUS.—LINN.

POLAR BEAR.—WHITE BEAR.

P L A T E X C I.—Male.

U. Capite elongata; cranio applanato; collo longo; pilis longis molli-
bus, albis.

CHARACTERS.

Head, elongated; skull, flat; neck, long; hair, long, soft, and white

—SYNONYMES.

WHITE BEAR. Marten's Spitz. Trans., p. 107. An. 1675.

URSUS MARITIMUS. Lin. Syst.

URSUS ALBUS. Brisson, Regne, an. p. 260.

L'OURS BLANC. Buffon, vol. 15, p. 128. An. 1767.

URSUS MARINUS. Pallas, vol. 3, p. 69.

POLAR BEAR. Penn. Arct. Zool., p. 53.

- URSUS MARITIMUS. Parry's 1st voyage, Supp., p. 183.
 " " Franklin's 1st voyage, p. 648.
 " " Parry's 2nd voyage, Appendix, p. 288.
 " " Richardson, Fauna, p. 30.
 " " Scoresby's Account of the Arctic Regions.

DESCRIPTION.

Head and muzzle narrow, prolonged on a straight line with the forehead, which is flattened; snout, naked; ears, short; neck, long; body, long in proportion to its height; soles of the hind feet equal to one-sixth of the length of the body; hair, rigid, compact and long on the body and limbs, is from two to three inches in length, with a small quantity of fine and woolly hair next the skin. The whole animal wears the appearance of great strength without much agility.

COLOUR.

The naked extremity of the snout, the tongue, margins of the eyelids, and the claws, are black; lips, purplish black; eyes, dark-brown; interior of the mouth pale violet. The hairs on every part of the body are of a yellowish-white colour.

DIMENSIONS.

Specimen in the Charleston Museum:—

	Feet	Inches.
Head and body, - - - - -	6	9
Tail, (vertebræ), - - - - -		10
“ to end of hair, - - - - -	1	1
Height of ear, - - - - -		3 $\frac{3}{4}$
Height from shoulder, - - - - -	3	3
Girth around the body, - - - - -	6	3
“ around the hind leg, - - - - -	1	7
Length of canine teeth, - - - - -		1 $\frac{3}{8}$
“ of incisors, - - - - -		0 $\frac{3}{4}$

We append the following measurements taken from specimens in the flesh, by Capt. J. C. Ross, R.N., F.R.S., &c. :—

	MALE.	FEMALE.
	Inches.	Inches.
Length from snout to end of tail, - - -	94	78
Snout to shoulder, - - - - -	33.5	26.3
Snout to occiput, - - - - -	18.4	15.6
Circumference before the eyes, - - -	20.4	15.8

	MALE.	FEMALE.
	Inches.	Inches.
At broadest part of the head, - -	32.2	28
At largest part of the abdomen, - -	65.2	57.6
Length of alimentary canal. - - -	61	52
Weight,	900lbs.	700lbs.

The weight varies very much according to the season and condition of the animal.

The largest measured 101.5 inches in length, and weighed 1028 lbs., although in poor condition.

HABITS.

We have journeyed together, friend reader, through many a deep dell, and wild wood, through swamp and over mountain; we have stemmed the current of the Mississippi, sailed on our broad lakes, and on the extended sea coast, from Labrador to Mexico; we have coursed the huge buffalo over the wide prairies, hunted the timid deer, trapped the beaver, and caught the fox; we have, in short, already procured, figured, and described, many of our animals; and now, with your permission, we will send you with the adventurous navigators of the Polar Seas, in search of the White Bear, for we have not seen this remarkable inhabitant of the icy regions of our northern coast amid his native frozen deserts; and can therefore give you little more than such information as may be found in the works of previous writers on his habits. During our visit to Labrador in 1833, we coasted along to the north as far as the Straits of Belleisle, but it being midsummer, we saw no Polar Bears, although we heard from the settlers that these animals were sometimes seen there; (on one occasion, indeed, we thought we perceived three of them on an ice-berg, but the distance was too great for us to be certain), although the abundance of seals and fish of various kinds on the shores, would have afforded them a plentiful supply of their ordinary food. They are doubtless drifted far to the southward on ice-bergs from time to time, but in our voyages to and from Europe we never saw any, although we have been for days in the ice.

The Polar Bear is carnivorous, in fact omnivorous, and devours with equal voracity the carcasses of whales, abandoned, and drifted ashore by the waves; seals, dead fish, vegetable substances, and all other eatable matters obtainable, whether putrid or fresh. Dr. RICHARDSON, in the *Fauna Boreali Americana*, has given a good compiled account of this animal, and we shall lay a portion of it before our readers. The Dr. says:—"I

have met with no account of any Polar Bear, killed of late years, which exceeded nine feet in length, or four feet and a-half in height. It is possible that larger individuals may be occasionally found; but the greatness of the dimensions attributed to them by the older voyagers has, I doubt not, originated in the skin having been measured after being much stretched in the process of flaying."

The great power of the Polar Bear is portrayed in the account of a disastrous accident which befel the crew of BARENTZ's vessel on his second voyage to Waigat's Straits. "On the 6th of September, 1594, some sailors landed to search for a certain sort of stone, a species of diamond. During this search, two of the seamen lay down to sleep by one another, and a White Bear, very lean, approaching softly, seized one of them by the nape of the neck. The poor man, not knowing what it was, cried out "who has seized me thus behind?" on which his companion, raising his head, said, "Holloa, mate, it is a Bear," and immediately ran away. The Bear having dreadfully mangled the unfortunate man's head, sucked the blood. The rest of the persons who were on shore, to the number of twenty, immediately ran with their match-locks and pikes, and found the Bear devouring the body; on seeing them, he ran upon them, and carrying another man away, tore him to pieces. This second misadventure so terrified them that they all fled. They advanced again, however, with a reinforcement, and the two pilots having fired three times without hitting the animal, the purser approached a little nearer, and shot the Bear in the head, close by the eye. This did not cause him to quit his prey, for, holding the body, which he was devouring, always by the neck, he carried it away as yet quite entire. Nevertheless, they then perceived that he began himself to totter, and the purser and a Scotchman going towards him, they gave him several sabre wounds, and cut him to pieces, without his abandoning his prey.

In BARENTZ's third voyage, a story is told of two Bears coming to the carcass of a third one that had been shot, when one of them, taking it by the throat, carried it to a considerable distance, over the most rugged ice, where they both began to eat it. They were scared from their repast by the report of a musket, and a party of seamen going to the place, found that, in the little time they were about it, they had already devoured half the carcase, which was of such a size that four men had great difficulty in lifting the remainder. In a manuscript account of Hudson's Bay, written about the year 1786, by Mr. Andrew Graham, one of PENNANT's ablest correspondents, and preserved at the Hudson's Bay house, an anecdote of a different description occurs. "One of the Company's servants who was tenting abroad to procure rabbits, (*Lepus*

Americanus), having occasion to come to the factory for a few necessaries, on his return to the tent passed through a narrow thicket of willows, and found himself close to a White Bear lying asleep. As he had nothing wherewith to defend himself, he took the bag off his shoulder and held it before his breast, between the Bear and him. The animal arose on seeing the man, stretched himself and rubbed his nose, and having satisfied his curiosity by smelling at the bag, which contained a loaf of bread and a rundlet of strong beer, walked quietly away, thereby relieving the man from his very disagreeable situation."

Dr. RICHARDSON says, "They swim and dive well, they hunt seals and other marine animals with great success. They are even said to wage war, though rather unequally, with the walrus. They feed likewise on land animals, birds, and eggs, nor do they disdain to prey on carrion, or, in the absence of this food, to seek the shore in quest of berries and roots. They scent their prey from a great distance, and are often attracted to the whale vessels by the smell of burning *kreng*, or the refuse of the whale blubber."

The Dr. quotes Captain LYONS, who thus describes the mode in which the Polar Bear surprises a seal:—"The Bear, on seeing his intended prey, gets quietly into the water, and swims to the leeward of him, from whence, by frequent short dives, he silently makes his approaches, and so arranges his distance, that, at the last dive, he comes to the spot where the seal is lying. If the poor animal attempts to escape by rolling into the water, he falls into the bear's clutches; if, on the contrary, he lies still, his destroyer makes a powerful spring, kills him on the ice, and devours him at leisure." Captain LYONS describes the pace of the Polar Bear, at full speed, as "a kind of shuffle, as quick as the sharp gallop of a horse."

The Polar Bear is by no means confined to the land, on the contrary he is seldom if ever seen far inland, but frequents the fields of ice, and swims off to floating ice or to ice-bergs, and is often seen miles from shore.

It is said that these animals "are often carried from the coast of Greenland to Iceland, where they commit such ravages on the flocks that the inhabitants rise in a body to destroy them." Captain SABINE saw one about midway between the north and south shores of Barrow's Straits, which are forty miles apart, although there was no ice in sight to which he could resort to rest himself upon. The Polar Bear is said to be able to make long leaps or springs in the water.

This species is found farther to the north than any other quadruped, having been seen by Captain PARRY in his adventurous boat-voyage beyond 82 degrees of north latitude

PENNANT, who collected from good authorities much information relative to their range, states that they are frequent on all the Asiatic coasts of the Frozen Ocean, from the mouth of the Obi eastward, and abound in Nova Zembla, Cherry Island, Spitzbergen, Greenland, Labrador, and the coasts of Baffin's and Hudson's Bays. Dr. RICHARDSON says,—“They were seen by Captain PARRY within Barrow's Straits, as far as Melville Island; and the Esquimaux to the westward of Mackenzie river, told Captain FRANKLIN that they occasionally, though very rarely, visited that coast. The exact limit of their range to the westward is uncertain, but they are said not to be known on the islands in Behring's Straits, nor on the coast of Siberia to the eastward of Tchutskoinoss. They are not mentioned by LANGSDORFF and other visitors of the Northwest Coast of America; nor did Captain BEECHEY meet with any in his late voyage to Icy Cape. None were seen on the coast between the Mackenzie and Copper-Mine River; and PENNANT informs us, that they are unknown along the shores of the White Sea, which is an inlet of a similar character.”

Dr. RICHARDSON does not think that the Polar Bear is under the same necessity for hibernating that exists in the case of the Black Bear, which feeds chiefly on vegetable matters, and supposes that although they may all retire occasionally to caverns in the snow, the pregnant females alone seclude themselves for the entire winter. In confirmation of this idea the Dr. mentions that “Polar Bears were seen in the course of the two winters that Capt. PARRY remained on the coast of Melville Peninsula; and the Esquimaux of that quarter derive a considerable portion of their subsistence, not only from the flesh of the female Bears, which they dig together with their cubs from under the snow, but also from the males, that they kill when roaming at large at all periods of the winter. To this statement is added HEARNE's account; he says:—“The males leave the land in the winter time and go out on the ice to the edge of the open water in search of seals, whilst the females burrow in deep snow-drifts from the end of December to the end of March, remaining without food, and bringing forth their young during that period; that when they leave their dens in March, their young, which are generally two in number, are not larger than rabbits, and make a foot-mark in the snow no bigger than a crown piece.”

“In winter,” says Mr. GRAHAM, “the White Bear sleeps like other species of the genus, but takes up its residence in a different situation, generally under the declivities of rocks, or at the foot of a bank, where the snow drifts over it, to a great depth; a small hole, for the admission of fresh air, is constantly observed in the dome of its den. This, however, has

regard solely to the she Bear, which retires to her winter-quarters in November, where she lives without food, brings forth two young about Christmas, and leaves the den in the month of March, when the cubs are as large as a shepherd's dog. If, perchance, her offspring are tired, they ascend the back of the dam, where they ride secure either in water or ashore. Though they sometimes go nearly thirty miles from the sea in winter, they always come down to the shores in the spring with their cubs, where they subsist on seals and sea-weed. The he Bear wanders about the marshes and adjacent parts until November, and then goes out to the sea upon the ice, and preys upon seals."

The Esquimaux account of the hibernation of the Polar Bear is curious: it was related to Capt. LYONS by one of their most intelligent men, rejoicing in the euphonious name of (Mr.) Ooyarrakhioo! and is as follows:—"At the commencement of winter the pregnant bears are very fat, and always solitary. When a heavy fall of snow sets in, the animal seeks some hollow place in which she can lie down and remain quiet, while the snow covers her. Sometimes she will wait until a quantity of snow has fallen, and then digs herself a cave: at all events, it seems necessary that she should be covered by, and lie amongst, the snow. She now goes to sleep, and does not wake until the spring sun is pretty high, when she brings forth two cubs. The cave by this time has become much larger by the effect of the animal's warmth and breath, so that the cubs have room to move, and they acquire considerable strength by continually sucking. The dam at length becomes so thin and weak, that it is with great difficulty she extricates herself, when the sun is powerful enough to throw a strong glare through the snow which roofs the den." The Esquimaux affirm that during this long confinement the Bear has no evacuations, and is herself the means of preventing them by stopping all the natural passages with moss, grass, or earth. The natives find and kill the Bears during their confinement by means of dogs, which scent them through the snow, and begin scratching and howling very eagerly. As it would be unsafe to make a large opening, a long trench is cut of sufficient width to enable a man to look down and see where the bear's head lies, and he then selects a mortal part, into which he thrusts his spear. The old one being killed, the hole is broken open, and the young cubs may be taken out by the hand, as, having tasted no blood, and never having been at liberty, they are then very harmless and quiet. Females, which are not pregnant, roam throughout the whole winter in the same manner as the males.

The Polar Bear is at certain seasons and under peculiar circumstances a dangerous animal. Like the Grizzly Bear it possesses both strength

and activity enough to render it at all times formidable. Although, like all Bears, it appears clumsy, can run with great swiftness either on the ground or on the ice, and it can easily ascend the slippery sides of icebergs by the assistance of its claws, being in the habit of mounting on their ridges and pinnacles to look out for food or survey the surrounding fields of ice.

When in confinement, the great strength of this Bear is sometimes manifested to the terror of the spectators. One that was secured in a cage fronted with rods of inch iron, bolted into a horizontal flat plate of the same metal, several inches wide, near the bottom, and well fastened at top, in the stout oak boarding of which the cage was constructed, one day when we were present became enraged by the delay of his keeper in bringing his food, and seized two of the rods with such a furious grip that one of them bent and instantly came out, when the huge beast nearly made his escape, and was only prevented from succeeding by the promptness of the attendants, who instantly placed the wooden front, used when travelling, on the open part of the broken cage and closed it effectually. This Bear, like all others we have seen caged, was very restless, and would walk backwards and forwards in his prison-house for hours together, always turning his head toward the bars in front, at each end of this alternating movement, and occasionally tossing his head up and down as he walked to and fro.

Many anecdotes are related of accidents to the crews of boats detached from whaling vessels to kill the White Bear, and by all accounts it appears to be exceedingly dangerous to attack this animal on the ice. One of these accounts, with others of a different character, we will repeat here, although they have been published by several authors.

Dr. SCORESBY tells us, that "a few years ago, when one of the Davis's Strait whalers was closely beset among the ice at the 'South-west,' or on the coast of Labrador, a Bear that had been for sometime seen near the ship, at length became so bold as to approach alongside, probably tempted by the offal of the provision thrown overboard by the cook. At this time the people were all at dinner, no one being required to keep the deck in the then immovable condition of the ship. A hardy fellow, who first looked out, perceiving the Bear so near, imprudently jumped upon the ice, armed only with a handspike, with a view, it is supposed, of gaining all the honour of the exploit of securing so fierce a visitor by himself. But the bear, regardless of such weapons, and sharpened probably by hunger, disarmed his antagonist, and seizing him by the back with his powerful jaws, carried him off with such celerity, that on his dismayed comrades

rising from their meal and looking abroad, he was so far beyond their reach as to defy pursuit."

An equally imprudent attack made on a Bear by a seaman employed in one of the Hull whalers, was attended with a ludicrous result. "The ship was moored to a piece of ice, on which, at a considerable distance, a large Bear was observed prowling about for prey. One of the ship's company, emboldened by an artificial courage derived from the free use of rum, which in his economy he had stored for special occasions, undertook to pursue and attack the Bear that was within view. Armed only with a whale-lance, he resolutely, and against all persuasion, set out on his adventurous exploit. A fatiguing journey of about a half a league, over a yielding surface of snow and rugged hummocks, brought him within a few yards of the enemy, which, to his surprise, undauntedly faced him, and seemed to invite him to the combat. His courage being by this time greatly subdued, partly by evaporation of the stimulus, and partly by the undismayed and even threatening aspect of the Bear, he levelled his lance, in an attitude suited either for offensive or defensive action, and stopped. The Bear also stood still; in vain the adventurer tried to rally courage to make the attack; his enemy was too formidable, and his appearance too imposing. In vain, also, he shouted, advanced his lance, and made feints of attack; the enemy, either not understanding, or despising such unmanliness, obstinately stood his ground. Already the limbs of the sailor began to quiver; but the fear of ridicule from his messmates had its influence, and he yet scarcely dared to retreat. Bruin, however, possessing less reflection, or being regardless of consequences, began, with audacious boldness, to advance. His nigh approach and unshaken step subdued the spark of bravery, and that dread of ridicule that had hitherto upheld our adventurer; he turned and fled. But now was the time of danger; the sailor's flight encouraged the Bear in turn to pursue, and being better practised in snow travelling, and better provided for it, he rapidly gained upon the fugitive. The whale-lance, his only defence, encumbering him in his retreat, he threw it down, and kept on. This fortunately excited the Bear's attention; he stopped, pawed, bit it, and then renewed the chase. Again he was at the heels of the panting seaman, who, conscious of the favourable effects of the lance, dropped one of his mittens; the stratagem succeeded, and while Bruin again stopped to examine it, the fugitive improving the interval, made considerable progress ahead. Still the Bear resumed the pursuit with a most provoking perseverance, except when arrested by another mitten, and finally, by a hat, which he tore to shreds between his teeth and paws, and would, no doubt, soon have made the incautious adventurer his victim, who was now rapidly losing strength.

but for the prompt and well-timed assistance of his shipmates—who, observing that the affair had assumed a dangerous aspect, sallied out to his rescue. The little phalanx opened him a passage, and then closed to receive the bold assailant. Though now beyond the reach of his adversary, the dismayed fugitive continued onwards, impelled by his fears, and never relaxed his exertions, until he fairly reached the shelter of his ship. The Bear once more came to a stand, and for a moment seemed to survey his enemies with all the consideration of an experienced general; when, finding them too numerous for a hope of success, he very wisely wheeled about, and succeeded in making a safe and honourable retreat."

Several authors speak of the liver of the Polar Bear as being poisonous. This is an anomaly for which no reason has yet been assigned; the fact seems, however, well ascertained. All the other parts of the animal are wholesome, and it forms a considerable article of food to the Indians of the maritime Arctic regions.

The skin of the Polar Bear is a valuable covering to these tribes, and is dressed by merely stretching it out on the snow, pinning it down, and leaving it to freeze, after which the fat is all scraped off. It is then generally hung up in the open air, and "when the frost is intense, it dries most perfectly; with a little more scraping it becomes entirely dry and supple, both skin and hair being beautifully white." "The time of the year at which the sexes seek each other is not positively known, but it is most probably in the month of July, or of August. HEARNE, who is an excellent authority, relates that he has seen them killed during this season, when the males exhibited an extreme degree of attachment to their companions. After a female was killed, the male placed his fore-paws over her, and allowed himself to be shot rather than relinquish her dead body."

"The pregnant females during winter seek shelter near the skirt of the woods, where they excavate dens in the deepest snow-drifts, and remain there in a state of torpid inaction, without food, from the latter part of December or early in January till about the end of March; they then relinquish their dens to seek food on the sea-shore, accompanied by their cubs."—GODMAN, Vol. I., pp. 152, 153.

The affection of the female Polar Bear for her young is exemplified by several stories in the Polar voyages. SCORESBY says, "a she Bear with her two cubs, were pursued on the ice by some of the men, and were so closely approached, as to alarm the mother for the safety of her offspring. Finding that they could not advance with the desired speed, she used various artifices to urge them forward, but without success. Determined to save them, if possible, she ran to one of the cubs, placed her nose under it, and threw it forward as far as possible; then going to the other,

she performed the same action, and repeated it frequently, until she had thus conveyed them to a considerable distance. The young Bears seemed perfectly conscious of their mother's intention, for as soon as they recovered their feet, after being thrown forward, they immediately ran on in the proper direction, and when the mother came up to renew the effort, the little rogues uniformly placed themselves across her path, that they might receive the full advantage of the force exerted for their safety."

The sagacity of the Polar Bear is said to be great, and it is very difficult to entrap this animal, as he scents the ground, and cautiously approaches even when the snare is concealed by the snow. SCORESBY relates an instance of a Bear which, having got his fore-foot in a noose, very deliberately loosened the slip-knot with the other paw, and leisurely walked off to enjoy the bait which he had abstracted.

Capt. J. C. Ross states in regard to this species :—"During our stay at Fury Beach many of these animals came about us, and several were killed. At that time we were fortunately in no want of provisions, but some of our party, tempted by the fine appearance of the meat, made a hearty meal off the first one that was shot. All that partook of it soon after complained of a violent headache, which with some continued two or three days, and was followed by the skin peeling off the face, hands, and arms; and in some who had probably partaken more largely, off the whole body. On a former occasion I witnessed a somewhat similar occurrence, when, on Sir Edward Parry's Polar journey, having lived for several days wholly on two Bears that were shot, the skin peeled off the face, legs, and arms of many of the party. It was then attributed rather to the quantity than the quality of the meat, and to our having been for sometime previous on very short allowance of provisions. The Esquimaux eat its flesh without experiencing any such inconvenience, but the liver is always given to the dogs, and that may possibly be the noxious part. The Esquimaux of Boothia Felix killed several during their stay in our neighbourhood in 1830, all males."

GEOGRAPHICAL DISTRIBUTION.

The Polar Bear inhabits the north of both continents, having been found in the highest latitudes ever reached by navigators. It was seen by Capt. Parry in latitude 82°. It exists on all the Asiatic coasts of the Frozen Ocean, from the mouth of the Obi, eastward, and abounds in Nova Zembla and Spitzbergen. In America it is found in Greenland, Labrador, and on the coasts of Baffin's and Hudson's Bays. They seem not to be found on the islands in Behring's Straits.

McKENSIE informs us that these animals are unknown in the White Sea, or on the coast of Siberia to the eastward of Tchutskoinoss. They have been seen on floating icebergs from fifty to a hundred miles at sea. Capt. Ross states that this species was found in greater numbers in the neighbourhood of Port Bowen and Batty Bay in Prince Regent's Inlet, than in any other part of the Polar Regions that were visited by the several expeditions of discovery. This he supposed was owing to the food they were enabled to procure in that vicinity, Lancaster Sound being but seldom covered by permanently fixed ice, and therefore affording them means of subsistence during the severity of an arctic winter, and also from its being remote from the haunts of the Esquimaux.

Audubon, John James and Bachman, John. 1851. "Ursus maritimus, Polar Bear [Pl. XCI, male]." *The quadrupeds of North America* 2, 281–292.

<https://doi.org/10.5962/p.322594>.

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