

not uncommon; they exist in some lakes in Wales, and also Loch-dow, Inverness-shire. They are merely instances of hereditary malformation.

In some of the lakes of Scotland, Cumberland, and Ireland, as Loch-awe, Ullswater, Lough Neagh, etc., a large species of trout, called the great grey trout, or the great lake trout, has been long known to exist. This species is extremely savage and voracious, feeding principally upon other fishes, among which the small common trout must be enumerated. We have had an opportunity of seeing specimens nearly a yard in length. Young fish of this species will rise at an angler's fly, but the larger ones can only be taken by trolling in a boat, the bait a small trout, and the tackle extremely strong. The flesh is indifferent, and of an orange yellow.

The lakes of Cumberland, Westmoreland, and Lancashire, some of the Scotch and Irish lakes, and the lake of Geneva, afford a delicately flavoured fish, known as the char, or alpine char (*Salmo umbla*); the potted flesh of which, though often mixed with that of trout, is sent to London.

The char averages from nine to fourteen inches in length; it is very shy,

and does not rise well at the fly, but is, nevertheless, sometimes taken by the trout-fisher; it will bite at the minnow more readily, and is often taken in deep water by drawing the bait sunk by means of a lead, two or three feet above the minnow, after a boat. The lake is to the char what the sea is to the salmon; on the approach of the breeding season, they ascend the rivers or feeders of the lakes, usually selecting those in preference which have a hard, stony, or rocky bed.

Hence the char of Windermere, contrary to the trout, choose the Brathy in preference to the sandy-bedded Rothay; and in November and December the shoals make their ascent. The flesh of the char when in season (June and July) is beautifully flaky, and of a fine orange tint. From unknown causes, char, even at the same season of the year, differ considerably in colour, hence the terms of gilt char, red char, silver char, and case char, applied in reference to this diversity.

Distinct from the northern char is a species found in some of the lakes of Wales, and more particularly in the deep Llyn Cawellyn, on the side of Snowdon.

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## THE POLAR BEAR.



THE Polar Bear is more elongated in form than the other members of the bear tribe; its ears and mouth comparatively small, the neck long and thick, and the sole of the foot very large and almost entirely covered with long hair, which gives it a firm hold of the ice on which it walks. It is an admirable swimmer and diver, while on the ice-fields it can run as quick as the gallop of a horse. Animals of the land and the sea, birds and their

eggs, the dead and the living, are alike devoured by it. It hunts the salmon and the seal, and the powerful walrus. The floating carcasses of whales form a great portion of its food. Captain Sabine saw one swimming, about midway between the north and south shore of Barrow's Straits, which are forty miles apart.

Some writers have asserted that they have seen the white or polar bear upwards of twenty feet long; others contend that it is never more than eight; but the stuffed specimen presented to



the Academy of Natural Sciences, Philadelphia, by Dr. Kane, measures nine feet in length, and in height about five feet; and it is not at all likely that they were the largest of the species.

"At the commencement of the winter, the she-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 there remains 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 snow. She now goes to sleep, and does not wake until the spring sun is pretty high, when she brings forth her two cubs. The cave has been enlarged by the animals' warmth, and they have room to move, and acquire considerable strength by continual sucking. The dam, however, becomes thin and weak; and it is with great difficulty she can extricate herself, when the sun begins to send a strong glare of light through her snow-arched canopy. She leaves the den in the month of March, when the cubs are as large as a shepherd's dog. If her offspring are tired, they ascend the back of their dam and ride securely, either on land or in water. Though they sometimes go nearly thirty miles from the sea in winter, they always come down to the shore in the spring with their cubs, where they subsist on seals and sea-weed. The he-bear wanders about the adjacent parts until November, and then goes out to the sea upon the ice and preys upon seals."

The Esquimaux hunt the she-bear during its confinement, by means of dogs that scent it through the snow. As soon as one is found, a long trench is cut sufficient to allow a man to look down, and see where the bear's head lies, and he then selects a vital part and thrusts in his spear. The old one being killed, the hole is broken up, and the cubs taken out alive.

Those who have read the interesting "Arctic Explorations" of Dr. Kane, will know the important place the bear occupies in arctic life, and from that work we will take two extracts. The first to show its great power of muscle, from the plunder of his *caches* or provision stores:—

"The final *cache*, which I relied so much upon, was entirely destroyed. It had been built with extreme care, of rocks which had been assembled by very heavy labour, and adjusted with much aid, often from capstan bars and levers. The entire construction was, so far as our means permitted, most effective and resisting. Yet these tigers of the ice seemed to have scarcely encountered an obstacle. Not a morsel of pemmican remained, except in the iron cases, which, being round with conical ends, defied both claws and teeth. They had rolled and pawed them in every direction, tossing them about like foot-balls, although over eighty pounds in weight. An alcohol-can, strongly iron-bound, was dashed into small fragments, and a tin can of liquor mashed and twisted into a ball. The claws of the beast had perforated the metal, and torn it up as with a cold chisel.

They were too dainty for salt meats; ground coffee they had an evident relish for; old canvas was a favourite, for some reason or other; even our flag, which had been raised 'to take possession' of the waste, was gnawed down to the very staff. They had made a regular frolic of it; rolling our bread-barrels over the ice foot and into the broken outside ice; and, unable to masticate our heavy India-rubber cloth, they had tied it up in unimaginable hard knots."

The second extract gives a thrilling account of the capture of a bear. "A medium-sized bear, with a four months' cub, was in active warfare with our dogs. They were hanging on her skirts, and she with wonderful alertness was picking out one victim after another, snatching



him by the nape of the neck, and flinging him many feet, or rather yards, by a barely perceptible movement of her head.

Tudla, our master dog, was already *hors de combat*; he had been tossed twice. Jenny, just as I emerged from the hatch, was making an extraordinary somersault of some eight fathoms, and alighted senseless. Old Whitey, staunch, but not bear-wise, had been the first in the battle; he was yelping in helplessness on the snow.

It seemed as if the controversy was adjourned: and Nannook evidently thought so; for she turned off to our beef-barrels, and began in the most unconcerned manner to turn them over and nose out their fatness. She was apparently as devoid of fear as any of the bears in the stories of old Barentz, and the Spitzbergen voyagers.

I lodged a pistol-ball in the side of the cub; at once the mother placed her little one between her hind legs, and, shoving it along, made her way behind the beef-house. Mr. Ohlsen wounded her as she went with my Webster rifle; but she scarcely noticed it. She tore down by single efforts of her fore-arms, the barrels of frozen beef which made the triple walls of the storehouse, mounted the rubbish, and snatching up a half-barrel of herrings, carried it down by her teeth and was making off. It was time to close, I thought. Going up within half-pistol range, I gave her six buckshot. She dropped, but instantly rose, and, getting her cub into its former position, moved off once more.

This time she would really have escaped but for the admirable tactics of our new recruits from the Esquimaux.

The dogs of Smith's Sound are educated more thoroughly than any of their more southern brethren. Next to the walrus, the bear is the staple of diet in the north, and, except the fox, supplies the most important element of the wardrobe. Unlike the dogs we had brought with us from Baffin's Bay, these are trained, not to attack, but to embarrass. They ran in circles round the bear, and when pursued would keep ahead with regulated gait, their comrades effecting a diversion at the critical moment by a nip at her hind-quarters. This was done so systematically and with so little seeming excitement as to strike every one on board.

I have observed bear-dogs elsewhere that had been drilled to relieve each other in the *mélee* and avoid the direct assault; but here, two dogs, without even a demonstration of attack, would put themselves before the path of the animal, and, retreating right and left, lead him into a profitless pursuit, that checked his advance completely.

The poor animal was still backing out, yet still fighting, carrying along her wounded cub, embarrassed by the dogs, yet gaining distance from the brig, when Hans and myself threw in the odds in the shape of a couple of rifle-balls. She staggered in front of her young one, faced us in death-like defiance, and only sank when pierced by six more bullets.

We found nine balls in skinning her body. She was of medium size, her length but seven feet eight inches. The net weight of the cleaned carcass was three hundred pounds; that of the entire animal, six hundred and fifty. Her cub weighed one hundred and fourteen pounds."