

XI.—*On the Manufacture of Works of Art by the Esquimaux.*
By CAPT. SIR EDWARD BELCHER, R.N.

IN an address to the late meeting of the British Association, Dr. Rae laid before you “An Account of the Aborigines of the Arctic as well as Sub-Arctic Regions of North America,” confined to the limits of those meridians between which his exploration was made, viz., between the 85th and 115th meridians of longitude west of Greenwich, and the parallels of 65° and 70° north.

In the present paper I intend to confine my remarks generally to the races with which I came in contact, and to facts I was able to record during very short and broken visits. And I am in a great degree fortified in supporting my observations made so many years ago, by a very complete collection of objects which I shall be able to submit to your inspection, and to which I shall have to refer in support of my views.

These objects, with my remarks, may possess a further interest as tending to connect the chain of Arctic Aborigines continuous from the eastern limit of Asia to Greenland.

It will be necessary, in order to understand my position, that I should inform you I was attached to H.M.S. *Blossom*, under the command of Captain Beechey, between the years 1825-9, in the attempt to meet and succour Franklin's Expedition in the endeavour to connect the coast between the Mackenzie River and Icy Cape. My appointment as lieutenant and assistant-surveyor for the detached duties connected with science generally, afforded me greater opportunities for communicating with the natives and collecting facts and materials than any other officer. I was generally accompanied by the late Dr. Collie and Mr. Tradescant Lay the naturalist, both of whom afforded me the great advantage of their advice and opinion upon all matters connected with the subjects to be reported on, and which I must say were subsequently given, but very partially, to the public in Beechey's narrative.

In order properly to connect my observations on the link connecting the Asiatic race, the Tchutchi with the north-western tribes of Esquimaux, it will be necessary to state that our first visit in June 1826 was made to Kamtschatka in order to procure a Tchutchi interpreter for the Esquimaux, who had already been met with by Kotzebue in the Sound which bears his name. Baron Wrangel was then present in his ship, the *Modeste*; and, in order to facilitate the duty which was entrusted

to me, his first lieutenant, Matiöuskin, was directed to give a ball to the natives. I had there the opportunity of seeing the northern tribe of the Tchutchi in all their finery, and also of judging of their state of civilization. I will not delay longer than to observe that, compared with the Esquimaux tribes met with by us on the American shores, they were more accomplished in Asiatic manners—particularly in music. They also manufactured their own violins, strings, and bows, and performed wonderfully, as compared with Europeans, perfect Paganinis, especially in the imitation of animals—at the same time being expert buffoons and actors—but there I must stop; in all other craft or handiwork having doubtless been relieved by the introduction of Russian manufactures, they were far behind the Esquimaux of western America in general intelligence, from whom they differed entirely in the matter of weapons.

Dr. Rae has described to us the snow-houses of more easterly tribes—of their peaceful habits or dispositions, and of the line where all navigators in those regions seem to agree, that their warlike propensities commence to develop themselves, the hostile propensity increasing to the westward until they reach Point Barrow.

The principal object of my paper is to bring before you “the stone implements of the western tribes at and north of Icy Cape” who had never been *directly* communicated with by any white man until I first set foot on Icy Cape.

Doubtless, at the limit of the Arctic Circle where Cape Prince of Wales meets the Asiatic shore, in sight and only thirty miles across, traffic had long been carried on between the races; but it is a well-known fact that the boundary lines of the respective tribes on the American side are as rigidly watched as they are between Belgium, France, and Germany. And we noticed the almost instant departure of one set of visitors as we passed the limit of their district, and were succeeded by another, and in one instance I witnessed not only this hostile disposition, but also the making captive a native chief, whom I had before captured and eventually been directed to land after his tribe had departed. He was a noble of his kind, and I almost wept with him at the sight of his distress.

The collection of objects before me results from my communication with the Aborigines, at and north of Cape Lisburne, and are manufactured by themselves; many of the short spear and arrow-heads were formed in my presence, from the chert taken *in situ*, and with the tools which I then purchased from them, which I propose presently to notice in detail. Some

were subsequently obtained at the Aleutian Islands,—Sitka, and California—and are now produced merely as interesting by comparison.

Before doing so, however, I think it due to a proper understanding of their different mode of living, to explain that these tribes dwell during summer in very substantial tents made with deer skins, and during winter in a peculiar species of den or log-house termed a *yourt*, which is precisely similar to those now in use in Kamstchatka as well as Greenland; but having been an inmate and examined each, that is, Asiatic, north-west America, and west Greenland, I am inclined to prefer the cleanliness of my friends about Icy Cape and “Delta Point” of Beechey.

The *yourt* is constructed of the heavy drift wood which abounds on the shores of the Arctic Sea, piled up in tiers, and unaccountably replaced within a few days if cleared away, and yet very seldom seen afloat. The spars, varying in length from thirty to sixty feet, and about nine or ten inches at the butt, consist generally of oak, common fir, white cedar, cypress, ash, and that species of juniper known in Canada as the *hackmatah*, nearly approaching in toughness as well as colour to our elm.

The outline of the Esquimaux *yourt* is formed by digging a pit about twelve feet square and ten in depth, and driving vertical piles within these lines. These serve for the support of long spars laid obliquely, and which, resting on their vertical ends, and ballasted with earth on their butts, form a four-sided pyramidal roof, leaving an opening at the summit about eighteen inches square, which serves as a window as well as ventilator, and which is closed when requisite by a frame, on which the large skin of the paunch of the whale or seal is stretched, excluding the air and cold, and yet affording a pleasant subdued light about equal to ground glass.

On each side bed places are placed, occupying one-fourth each of the internal space—the portion opposite to the door being allotted to the lamp, kitchen utensils, etc. Beneath is the main store room, affording about 1152 cubic feet, which, assuming meat to be as heavy as water, would give a solid content of 71,424 pounds. The flooring of the *yourt* is formed of split timber, nicely smoothed, the interstices filled or caulked internally and externally with moss; over all, outside, it is coated with bark, fine brushwood, and turf.

This building would be cold if entered directly from the outer level; but that there exists a *scientific association* there as well as here these implements fully attest, and undoubtedly

they have acquired the knowledge that cold does not ascend—therefore, they construct a long passage about four feet below the level of the flooring of this chamber, planked and covered in, through which, crawling on hands and knees, they arrive at and climb into the inner chamber, where comfort, and in many instances *cleanliness* and *taste*, prevail. Indeed, I may say, that the manners of these rude people seem, like more civilized individuals, to soften as you enter the drawing-room—distrust possibly giving way before confidence on finding you rely on their better feelings.

I would here beg to remark that the remains of the stone yourts noticed by us at Village Point, at the very limit where Franklin turned back, resemble closely those of Kamtschatka as well as Greenland, the entrance being on the low side facing the hill, and thus, although facing north-east, affording a much more protected porch.

At the period of my visit to Icy Cape in July and August, I found the winter store-house of the last season pretty well supplied with a mixture of reindeer, whale, walrus, seal, swans, ducks, &c., but *none fresh!* It was frozen into a solid mass beneath, but loose from those on the surface, and seemed to be incorporated, by some unexplained process, into a *gelatinous snow* which they scraped up easily with the hand and ate with satisfaction—fish oil predominating. It was not offensive nor putrid. How many years the lower mass may have remained there I could not determine, but estimating the supply in one yourt as proportioned for ten people, the allowance of inhabitants to each yourt, the daily proportion for the complete store would allow for three hundred days, or about twenty-four pounds per soul!

In the summer months the available resources of game, salmon, whales, seal, &c., as well as fruit, are enormous; consequently these stores on the arrival of spring are disregarded, and thus continue to accumulate.

I do not speak at random and therefore will give in direct terms three separate results of traffic during two separate visits.

Off Cape Lisburne—

1. One cutter load of salmon, say about 1 ton .. one-fifth lb. tobacco = 5*d.*
2. " " eider duck " ½ ton .. " " "

At Icy Cape—

	Purchased by	s. d.
610 lbs of solid venison	1 knife.....	0 4
Seven haunches, ditto	1 string beads	0 0½
One seal-skin full of reindeer fat = 60 lbs, two very large swans	1 lb tobacco	2 0

2 4½

The latter supply reached the ship, but the two former, after stowing away selected portions, were thrown overboard as encumbering the vessel, a decked boat of four tons.

Therefore, as regards provision, the vicinity of Icy Cape seems to abound in every variety, provided the natives will consent to sell; and to secure an increased supply it will only be necessary to select such articles as are *useful*, as they will instantly part with their most treasured stores, as, for instance, a canoe for an axe or saw—and latterly woollen cloth and blankets seemed to possess the greatest value. I found latterly they began to form more sensible opinions as to barter, and very often we discovered that they parted with defective tools, etc.

Their modes of cooking at the period to which I allude were very simple. A salmon split and traversed by seven or eight skewers transversely, was again threaded, in and out, longitudinally, by a long wooden spit. This, stuck into the ground, and inclined over the fire, caused the hot fat from the tail to run down the sides and cleanly and effectually roast the whole fish fit for any epicure.

In boiling, for they had not then seen metal kettles, they used those neat birchwood tubs prevailing throughout Canada. Filling the vessel with water they cast in red hot stones until they effected the object of boiling, on this they placed the object and covered all with a tub, so as to prevent the escape of steam—and I beg here to observe that such was then the practice also of the Indians of California, whose habits in very many respects resemble those of the Esquimaux, and to which I shall allude presently in speaking of weapons, or obsidian-pointed arrows.

Their propensity for ardent spirits had not then been elicited, but tobacco they coveted and knew as *tawac*, probably picked up at the instant they heard the name from our men. But smoking had been long their habit, and their pipes with their stone carved bowls afforded proof of great ingenuity. Before our communication and introduction of tobacco, they used the stem and down of a peculiar grass steeped in some aromatic gum (and natron), probably derived from a fir, as we found them in possession of little bags of what in North America is termed l'argent, used for chewing, cleansing the teeth, and perfuming the breath—possibly, I might suggest, by some of the present audience, at all events by most of my fair Canadian acquaintances, even under the roof of the government house. Indeed, one distinguished lady now imports it into this country as a luxury.

But to return to their custom of smoking before the introduction of tobacco. This seems to be allied to some superstitious ceremony from which women and boys are excluded.

The party being seated, and the bowl of the pipe, which is only one-eighth of an inch in diameter by three-quarters of an inch in depth, filled, the leader or chief of the party commences by inhaling by deep and rapid inhalations so as suddenly to exhaust the tobacco, and without permitting any smoke to escape. Suddenly he passes the pipe to his nearest neighbour, and throwing himself forward on his face, seems to become stupified—indeed, insensible for many minutes—recovering gradually with a wild, stupid gaze, denoting a very severe effect on the brain.

Those around preserve a superstitious silence and demeanour, and for some time remain so, no one attempting to refill the pipe until the paroxysm has passed away. My reason for attributing this to a superstitious origin is, that they never conclude a weighty bargain or resolve pacific or hostile questions without reference to the pipe; a habit too well known among the inland tribes of Indians to need further remark.

Dr. Rae has graphically described to you the habits of the seal as well as the modes of deceiving them, and the devices resorted to in order to effect their capture. One mode, differing from that described by him, and where no ice was present, and in warm weather, the month of August, I witnessed. Two Esquimaux encased themselves in seal skins and swam about a rock on which several true seals were basking, perfectly deceiving me also. The seals became frightened, and before I could obtain a shot at them took to the water. The false seals took their places on the rocks, and I had levelled my rifle and was about to fire, when one of my boat's crew exclaimed, "It is a husky, sir!" One moment more he would have been killed. I kept in ambush watching them intently until they succeeded in enticing their prey to them by low whining cries. When they arrived within a yard of the rock where the false seals were, one of the latter dealt a blow on the nose, the other having his arms free, shot its companion with an arrow to which a long line and a float was attached (No. 59 of collection), allowing him to drift down with the tide. Two were thus taken and secured by their companions awaiting the result in their oomiak behind the neighbouring rocks.

The mode of preparing their skins is left principally to their ladies, who extract the oil from the inner side of the skin by mastication, leaving it soft as chamois leather and beautifully clean.

Dr. Rae has referred to their signs, counting on their fingers, etc., and considered that they have no records. At Icy Cape I had occasion to think otherwise, and that the apparent counting on the fingers has a deeper signification than mere numerals. And they added in the instance to which I refer the seeking for a pair of notched sticks similar to a baker's tally.

Making use of the sticks and working with the fingers, apparently using each joint to denote some signal, and the front and back as variations—possibly as past and future—they at length by the intervention of the seer—which I think has been noticed by Beechey—made me understand that something preceding my visit was referred to, and since then I have been induced to think that it related to some matters connected with Sir John Franklin's boat expedition in 1826-7, passed on from tribe to tribe by tradition.*

The same terms for deer and seal—reindeer, took-toob; seal, neit-sek uk-sook—will be found to prevail throughout Asia, America, and Greenland; also the terms for oomiak, kaiack, and the models of their canoes scarcely differ.

As regards their hostility or friendship my experience taught me that much depended on the person they had to deal with, dislike to special individuals being distinguished by the habit of bestowing nick-names; the marked peculiarity of feature, particularly in eye or nose, being specially seized on for either friendly or ridiculous terms.

After the wreck of the barge, in Kotzebue Sound, I had occasion to live amongst them for some days, and soon found that so long as I maintained the superiority mentally, or could teach them easier modes of effecting any object by some process superior to that used by them, they submitted to my direction, and probably, if my fate had compelled me to take my lot amongst them, I might have become a chief and lived comfortably; and it is on this ground that I still adhere to the notion that *possibly* some one or two of the best constitutions of the crews of the *Erebus* and *Terror* may *willingly* be living amongst them, for we have the testimony of Dr. Kane of the sympathetic feeling for the savage life which prevailed amongst his crew; and the crew of the *Bounty* furnishes in a warmer climate a parallel, independent of similar instances in New Guinea and New Zealand, where escaped convicts have settled and become important personages.

Of their capacity for hostility and determined courage under

* The histories engraved on their drill bows denote the habit of record—if even of passing events. May it not refer to actions with whales, deer, or walrus, involving peril or death of chiefs, etc.?

fearful odds, we unfortunately in the *Blossom* had undoubted proof. Nine of these unfortunate beings with bows and arrows withstood the advance of forty men and officers fully armed! nor were they deterred, under the very guns of the *Blossom* and musketry fired over their heads *in warning*, from landing *in defiance* on the Island of Chamisso, absolutely returning after they had been persuaded to quit it! Nine of our men were severely wounded. Six of their party were killed, the remainder it is supposed escaped, as our men were withdrawn to prevent further slaughter on their side. Thus, then, if any expedition proceeds easterly, adequate force to protect themselves must not be lost sight of, particularly in rounding Cape Barrow.

One further remark as to the ladies. In all communities they are the most important part of our species. It is for them throughout the world, wherever we find man capable of civilization or the slightest improvement, that all his pursuits seem to be directed. Mark the hunter returning from his toils laden with booty, where does he deposit it? sulky, surly, or tyrannical, even if ungraciously disposed, at the feet of his mate to be cooked for their mutual consumption!

In the event of hostilities in some savage countries, woman, as she should be, is the flag of truce. Even the savage will not fight if woman be interposed, and amongst the people I am treating of their absence is always to be reckoned on as indicative of distrust, fear, or possibly treachery.

But in the torrid zone, in Africa as well as in the Arctic Regions, woman has her value, and parents will not part with them without a valuable consideration. Such I found to be the case on the western coast of America. The tribe took a strange liking to one of our officers, they wished much to retain him with them, and offered to give him without remuneration, (indeed, to add loads of furs,) their chief beauty, and a yourt. He, I think sensibly, preferred trusting his fate on surer grounds—at least in a much pleasanter climate.

All the clothes, finery—indeed, I may add, very delicate embroidery—are executed throughout the regions under discussion by the women; and our museums all attest the beauty of their designs, as well as the extreme delicacy of their manufacture. Looking specially, then, to the specimens derived from Greenland, others from Canada, and I regret I have not brought the most perfect of the chatelaines from Icy Cape, can we for a moment allow that males as well as females possessing such taste and aptitude for invention, are not in a condition for improvement as well as civilization. Indeed, if they are not tampered with by the introduction of ardent spirits, who shall

assert that at no very remote period those people may not be furnishing for our Pacific commerce, in Japan and northern China, products of considerable value, as regards mercantile transactions for exchange of goods. Salmon may be cured, furs obtained, and minerals, of value to the Japanese, taken to their southern markets. We have not as yet ascertained from what source plumbago and other minerals which we often find among them are obtained, simply because we have not exhibited to them the objects in their crude state, nor made them understand the demand or the articles which would be given in exchange.

I think my friend Dr. Rae will be prepared to admit as regards the mixed breed of French origin, southerly of the parallel to which my remarks have reference, that the influence there of the female sex in advancing civilization is most important. Indeed, I was assured by several of the most noted and warlike hunters who travel through the hostile Indian tribes to the north-east of the Hudson's Bay former territory, at Fort Vancouver, on the River Columbia, that their wives were indeed their better halves; that either by tact, by the vigour of their arm, by rifle, or knife, they had often come to the rescue and saved their lives. And yet the famed individuals I then saw and conversed with were not wanting in feminine beauty or grace.

In treating of the instruments now submitted to you, I will first direct your attention to the native planes. All those articles, if closely studied, possess intense interest, exhibiting not only deep thought for the necessities of the moment, but also a far greater degree of arrangement as to the position of the hand and fingers, as well as guard for the wrist, than can be traced amongst others in connection with the most civilized nations.

(No. 47.) That constructed of wood is certainly the most elaborate, and by the distribution of the fingers as well as provision for the muscular powers of the hand and wrist, ensures the utmost exertion of power without endangering fingers or wrist.

The three now before you were obtained at Cape Lisburne in 1826, and the ivory, which is fossil, doubtless from the great fossil deposit found at Escholtz Cliffs in Kotzebue Sound, of which drawings will be found in the narrative of Captain Beechey's voyage.

The next objects alluded to are the chert or flinty weapons in general use amongst the Esquimaux from the parallel of the Aleutian chain, or about 60° north to 72° north, and along the whole coast easterly towards the Great Fish River. It is

therefore probable that there are many positions on the coast from whence they are able to obtain this important article. From my own observation, however, I am only able to speak to one locality—that is at the base of Cape Lisburne, forming the south-west angle of the bay, where much coal was noticed, *in situ*, and which has Icy Cape for its northern horn. It would be more properly designated “Icy Point,” being a long low spit, but Cook noticing the loom of a hummock behind it, and probably unaware of the intervening marsh, gave the name which has been retained to the present day.

(No. 62.) The series of objects presented to notice includes those especially collected at Cape Lisburne and the vicinity, because I there *saw* the chert taken from the vein and manufactured under my inspection.

Cape Lisburne is about sixty feet in height, composed of a greyish dolomite, in which many fossil encrinites, corals, and crustacea are found. Near the base, about four feet above the sea level, a vein of chert is found, on which this friable stone lies. It varies from about nine inches inland (as exposed) to about three or four inches, as it is lost in the gravelly beach. It is broken in vertical shivers, or conchoidal plates, by a slight tap with the hammer formed of a very stubborn jade, or nephrite (No. 61), the splinters affording a ringing sound like glass or pottery. The fragments, indeed, in many instances, were already sufficiently formed without human aid for the ordinary purposes of flaying, or skinning off the superfluous fat from hides, etc.; indeed it then occurred to me that many fragments, where nature seemed either to have pressed heavily, or acted by frost, were so splintered and almost formed by nature to be used as arrow or spear heads without further attention to chipping. But to the *process* which they pursue in effecting the fine regular serrated edges which you will notice in those specimens now before you.

Possibly, had I not witnessed the operation, and been at the time one of the first Europeans with whom they ever held communion, the idea would have remained undisputed that “they owed their formation to the stroke of the hammer.” Being a working amateur mechanic myself, and having practised in a very similar manner on glass with a penny piece in 1815, I was not at all surprised at witnessing their *modus operandi*. Selecting a log of wood, in which a spoon-shaped cavity was cut, they placed the splinter to be worked over it, and by pressing gently along the margin vertically, first on one side, then the other, as one would set a saw, they splintered off alternate fragments until the object, thus properly outlined,

presented the spear or arrow-head form, with two cutting serrated sides.

(No. 44.) But let us revert to this instrument for the use of which the untaught would *never imagine a purpose*, and I suspect was not witnessed or deemed worthy of notice by any other individual of the expedition.

First, this instrument (again ornamented) has a graceful outline. The handle is of fine fossil ivory. That would be too soft to deal with flint or chert in the manner required. But they discovered that the point of the deer horn is harder, and also more stubborn; therefore, in a slit, like lead in our pencils, they introduced a slip of this substance and secured it by a strong thong, put on *wet*, but which on drying becomes very rigid. Here we cannot fail to trace ingenuity, ability, and a view to ornament. It is the point of deer horn, which refusing to yield, drives off the fine conchoidal splinters from the chert.

I cannot here omit remarking that the very same process is pursued by the Indians of Mexican origin in California with the obsidian points for their arrows. And also in the north and south Pacific, at Sandwich Islands, 21° north, and Tahiti, 18° south—30 degrees=2340 miles asunder—similar indentations or chippings are carried out in forming their axes from basaltic lava, but probably performed in the latter instances with stone hammers. I myself witnessed at the Convent of Monterey the captured Indians forming their arrow-heads out of obsidian exactly similar to the mode practised by the Esquimaux.

It is as well to observe that the Esquimaux use several kinds of arrow-heads. First, one entirely of chert about four inches in length (No. 62); second, one of deer horn pointed with chert; thirdly, variously shaped, barbed—bifurcate, trifurcate, and quadrifurcate—entirely of horn* or ivory; but the two first are those in principal use.

The range obtained by measurement when shot by one of the most powerful of the tribe, was one hundred and seventy-six yards. This was also the extreme range obtained by any of the bows obtained between California and Icy Cape, and by comparison, as between the heaviest and lightest weapons. It will be seen that the Californian arrow is very light, being but a reed pointed.

Their drill bows seem to possess almost an historic character—as you may notice on them indeed, if we could have properly

* Wherever horn is named, it refers to the hard point of the antler of the reindeer.

pursued the investigation—even of *records*, of particular feats of hunting, at least the pictorial illustration thereof.

The drill bows are formed from the curved portion of the walrus tusk, and when recent possess great elasticity; but when old or too much dried, splinter and break very easily.

(Nos. 37, 38, 39). The drill itself I found invariably formed of a green jade, once of leek green *prase*, very stubborn; and to the present time their mode of cutting, shaping, and polishing their labial ornaments as well as these hard substances, is to us a secret.

The thong of the drill bow being passed twice round the drill, the upper end is steadied by a mouthpiece of wood, having a piece of the same stone imbedded, with a countersunk cavity. This held firmly between the teeth directs the tool. Any workman would be astonished at the performance of this tool on ivory; but having once tried it myself, I found the jar or vibration on the jaws, head, and brain, quite enough to prevent my repeating it.

(Nos. 65 to 69.) The “labrets” which are produced, are of similar stone to the drills, but by what process cut could not be discovered. British lapidaries consider them very difficult even to polish.

(No. 2.) I was at one time possessed of numerous and very beautiful specimens of needlework, or embroidery on skin dresses, but unfortunately they were damaged by water, rotted, and were during my absence lost. One cap only remains, obtained from the Aleutian Islands, where I consider they are more civilized, equal to Greenland.

(Nos. 4 and 5.) The grand dress termed the *kamlaika* was constructed of narrow strips of prepared seal intestine, which formed a close garment, where the face and hands only were exposed. This, worn outside the customary fur dresses, retained the heat and kept out wind and rain; indeed, when well wet, seemed to preserve the internal temperature much better than furs.

The needlecases of the females are also objects of considerable interest to the close observer. On casual inspection they will scarcely attract attention; but this *chatelaine*, as I will venture to term it, has its uses as well as ornaments, clearly derived from the wants of the natives—and here, too, their undoubted ingenuity is remarkably apparent.

The outer case of walrus ivory is admirably adapted for the purpose. The needle varies only from our own by its four-sided shape, and its fineness astonishes us as well as their mode of drilling its minute eye, not yet known.

The thong which is used to preserve them indicates civilized ideas; for we find it composed of sealskin, defying water from without, yet affording a soft, woolly nature within, not forgetting that amount of oil necessary to preserve the needles from rust. Then the lapping of the sides together, and drawing them with a wedge-like power through the ivory tubes effectually excludes air as well as water. Nor do we stop there. Amongst the apparent ornaments we notice a hook composed of ivory. Its use is not only to retain the work steady, but also to retain temporarily any fresh object of interest until it be transferred to the company of other "charms."

Amongst these charms invariably were noticed, figures of seal, deer heads, geese and ducks. It is well known amongst the more civilized tribes that a young woman or her parents do not consider any suitor entitled to consideration until he has proved himself able to maintain a wife. And the Esquimaux also, by his prowess in the capture of the game, proves himself fit to provide for the sustenance of his mate. Hence, probably, these are cherished mementos of early exploits and presents to objects of affection.

I have already cursorily alluded to the labrets or lip and cheek ornaments of the Esquimaux. I have been able to procure the entire set of instruments which throw a light on their habits of forming the necessary aperture in the cheek from infancy up to puberty (No. 65); and the series of ivory guides, if I may so term them, indicate their practice to bear a very close resemblance to our habit of piercing the ears of our young ladies for ear rings, and also to that of New Guinea and the Feejee Islands in straining the lobes of the ears as well as septum of the nose for their enormous ornaments, requiring apertures of an inch and a half diameter! In the case of the Esquimaux, punctures are made in the cheeks sufficiently large to admit of an ivory cylinder being passed from within outwards, commencing at the size of a large bodkin, they are gradually changed to a bore of half an inch, and eventually may be stretched in old persons to the size of an inch and a half. The labrets up to a certain age are introduced from the inside of the mouth, but those of the latter dimensions I have stated (No. 69), are from without much in the manner of our shirt studs, one side of the inner portion being longer than its opposite to prevent its slipping out.

(No. 64). The ladies have a separate ornament, being a cup-shaped wooden object, shaped as under.

Formations of bows and arrows—steaming wood.

It must, doubtless, throughout all savage nations, be conceded that directly or indirectly the value of steam has been

not only understood but acted on ; but it is more particularly noticeable amongst the Indians of North America from the 50th parallel northwards.

(Nos. 60 and 60a). The bows of the Esquimaux are either in one single piece steamed to form, or at times composed of three pieces of wood, and it has always appeared to me that their object has been to produce a form very similar to the strung bow of the Tartars, and *totally dissimilar* to the tribes of Indians on the American shores southerly.

In the specimen now presented to your notice, the centre piece is bent by steam ; the ends are straight, and being fitted together at the angular bend, the exterior hollow is filled by pieces of deer horn, ivory, or walrus tooth, as may be convenient. Over this externally a series of thongs formed by plaiting the fine fibres of the neck sinew of the reindeer is laid, and then, as seamen term it, "hitched over" to keep it in place. Indeed, precisely such a structure as would be presented to us supposing a band of ants had eaten away all the fleshy portions of a snake and left the fibrous muscle covering the vertebræ. On bending this to its form for service, it can readily be imagined what extraordinary force is demanded to speed the bolt ; nor is this all ; in very many instances, where the power of the left hand is inadequate to retain the bow firmly in its position, the arms on being thrown but very slightly aside, upset and *destroy the bow entirely*, until almost reconstructed !

The arrows attached to each, both ivory and chert pointed, are short, and not made as one would imagine from the straightest-grained timber that could be met with, but from that which happens to be present on the beach. They are straightened instead of bent by steam in the manner following. Having shaved the shaft to nearly the thickness required, it is then bound round with the finest shavings in a spiral direction. It is then immersed in water and held over a fire of live coals, wetting it repeatedly with water until they deem it sufficiently steamed. Held by one end it is apparent from the spiral mode of binding, that it may be instantly slipped through and disencumbered of its covering. It is then treated with the tool represented beneath, and readily brought into its required straightness.

Thus much for the shaft. The chert head being duly shaped is inserted at the point—the winged feathers at the butt ; and, it would escape a casual observer, the deer sinew again performs the duty of securing them in their places by its glue-like as well as contractive powers.

The fine shavings of recently obtained whalebone also are employed for these purposes (*vide* spears, etc.); making nets

and springs for the capture of the *alca psittaca*, or Greenland parrot.

This custom of using the reindeer sinews is not confined to the northern tribes of America. I traced it continuously on the western coast as far south as the 36th parallel on the coast of California, where the Mexican Indians soak it and form it into layers in which they encase the wood of the bow entirely (vide bow 93, arrows 94). The horns of the bow are also moulded entirely of it, and when dry it presents the dull grey translucent features of horn.

The face of the bow is then polished off to show the wood. These bows are preserved with the utmost care in fur cases to prevent moisture reaching them, by which their strength would be materially diminished.

I will venture to trespass a little longer on your patience and ask your inspection of the many other implements obtained from these, to me at least, most interesting people; particularly as they prove in every article you may examine, fresh proofs of original invention, design, and invariably the faculty of making even their working tools serve the purpose of ornament. Nor can I take leave of the subject without expressing my conviction that their talents have been elicited by circumstances totally disconnected with any communication with civilized Europeans or Asiatics; although it is possible they may by internal traffic (which we are informed is carried on by one party depositing goods at a given spot and retiring, the other advancing and leaving furs, fish, oil, and objects adequate to the value of the goods taken, but free from *verbal intercourse*) receive iron, and copper, which cannot be otherwise accounted for, as it would not have possessed so high a value had they been able to procure it from native sources. They were, I was informed at Kamstchatka, forbidden articles of exchange with the Tchutki of Eastern Siberia.

The slung balls for taking birds lead one to the central portions of America; their adzes to the natives of the Polynesian Islands.

The use of the reindeer sinew is common from Norway and Lapland, along the entire coast of Asia and America, even as low as 30° north in California, and continued on the coast line up to the easternmost point of America, and again at Greenland.

Their fishing gear is generally highly ingenious, whether as to the adaptation of materials or the false baits, which can only be properly appreciated when viewed in water.

The snow spectacles are not wanting in merit, they meet perfectly the desired object.

The harpoons and lines are well made, but there is one

device for connecting them which has excited the admiration of every seaman, and it was so far in estimation in 1852 that a model in brass was made in the dockyard at Woolwich with the view of introducing it into the Royal Navy.

The throwing stick carries us to Australia.

(No. 79). The rattle is from the Aleutian Islands, but the figures, as well as those on the tombs of Western America, from the earliest days of Cook and Vancouver, all tend to ideas borrowed from Peru, and possibly, if through Tartary, from Egypt. I regret I have not some carved in slate, but they are still more in connection with Mexico.

It is remarkable, however, that none of the birds or human heads represent any known object, but are like those of Egypt, or I may say of New Zealand, creatures of fancy.

In stature, the northern Esquimaux, Tchutki, and native races at Greenland seem closely to agree. From measurement made by Dr. Collie and myself, the tallest man seen was five feet ten inches, the shortest five feet. The women invariably smaller in proportion. This is also remarkable in all the Indian tribes noticed on the coastline as far as the river Oregon. They were clothed generally with short shirts of sealskin next the body, over which an outer similar garment of deerskin, with a hood fringed with fur of fox, wolf, hare, or ermine. The lower garments were similar to those worn by the men, generally of sealskin, with warm legging boots outside, in some instances exhibiting ornamentation by mixed furs. At times dresses were noticed composed entirely of the skins of ducks or divers, and some few of salmon skins. (Nos. 4 and 5). In wet weather they use a waterproof dress, formed by sewing together the prepared intestines of the seal, which furnishes strips about four inches in width, and resembles coarse gold-beater's skin, or oil silk.

When they fear or intend hostility, they openly take off the fur deerskin dress, and clothe themselves in one of the same material, denuded of hair and completely tanned, which renders it considerably thicker as well as tough. Over this they replace the fur garment, draw their bow cases behind them, and then with perfect good humour resume communication. This intimates, "here we are already in case of quarrel, now to return to business."

They are quick, intelligent, active in resources to meet any sudden emergency; not easily disconcerted or excited to anger, and even when subjected to sudden chastisement, retaining apparently their good humour. There are some tribes far the reverse, but I consider that it resulted from the constant habit of warfare; from that habit of oppression of the weaker tribe

resulting from the knowledge of power amongst themselves—and in all these cases I think theft as a natural result followed. Where this was detected, it appeared, as we observe in the Chinese, that the commission of the act was not deemed a crime, but that detection, blundering, or want of expertness, was monstrous, and deserved punishment!

Their good feelings frequently prevailed, and in many instances I had to admire principles of honour creditable even to civilized individuals.

It then, and has since occurred to me, that about the 70th parallel, where coal, wood, salmon, whales, seal, walrus, and the fur trade offer considerable advantages, that civilization might be materially facilitated were the Aborigines not bound down by the iron hand of Russian domination. It seems to be a maxim rigidly followed out by all their officers on the north-western shores of America, as far down as their settlement of Sitka or New Archangel, closely adjacent to our settlement at Vancouver's Island, that all the native population shall be kept in bondage, and be debarred, as far as their power can effect it, from traffic with any other nation.

Even at Greenland a similar system prevails, and the Danish government even assumes the right to prevent the whale fishery in Davis' Straits!

I have before remarked that the handiwork of the western Esquimaux much resembles that which we find at Lievely, the principal Danish settlement. I may with safety assert that a stranger, viewing at hazard the productions obtained from the Aleutian Islands, on the western boundary of America, where the Russians have in some degree civilized the women, with those produced under nearly similar circumstances at Lievely, would be puzzled to detect any important difference either in the objects selected to represent models of their implements, canoes, dresses, etc., or in their attempted finery. And I would even go so far as to say that if a stranger could be instantaneously transferred from a yurt in Kamschatka in Siberia, to another at Lievely in Greenland, he would notice similar tones, if not a very similar language; observe the same costume, dresses, habits and occupations; the form and limbs of the females almost identical, not forgetting the small feet so much admired in the Tartar races from Canton to Siberia.

I cannot take leave of these labial ornaments, which may be carried south, to New Guinea at least, without a few remarks. The stone of which they are formed is evidently much prized by them, particularly the Nephrite, and latterly could not be obtained.

Now commencing at New Zealand—next at China throughout

—then Japan, that stone possesses a peculiar importance, and is extensively used in religious ornaments. Without it the Chinese Deity, good or bad, is incomplete. It is invariably a component part of the interior set of jewels placed within the chest (by a trap between the shoulders) of every Chinese idol. I had at one time no less than fourteen of these objects on my quarter deck, and from each a set was taken, similar to the one I now submit to you, but much larger. A question was put to the late Launcelot Dent as to the restoration of these deities after the ransom of Canton. But when it became known that these jewels had been profaned by the touch of the barbarians, they ceased to possess any further value. I was informed that each of the objects sent home in H.M.S. *Blenheim* was valued, if complete, at eight hundred dollars.

With the facts and observations I have placed before you I now leave the question, as to any previous intercourse, by the shores of America from Peru, or westerly through Siberia, Tartary, China, etc., with our Esquimaux friends, to those inclined to pursue the investigation, and conclude by thanking you for the patience with which you have endured my rambling remarks.

The objects not immediately belonging to Arctic natives or American Indians in contact with them, are presented in order to compare similar ideas where such vast ranges of sea intervene as probably to preclude all intercourse.

XII.—*Abstract of Observations on the Assyrian Marbles, and on their place in History and in Art.* By ROBERT KNOX, M.D., Hon. F.E.S., Corresponding Member of the Imperial Academy of Medicine of France, Foreign Associate of the Anthropological Society of Paris, etc., etc.

WHILST engaged in the composition of my work on the "Races of Men," the question as to how civilization originated, and what form it assumed in early times and amongst different races, frequently engaged my attention. The great value of artistic records cannot well be questioned, although it must also be admitted that there are in the very nature and essence of art itself circumstances calculated to lessen or even to destroy their value in a historical and scientific point of view. Keeping this in view, I made a careful survey, in as far as I could, of the remains of art to which I had access, directing my attention chiefly to the Coptic, as being that form of civilization which the artist had best illustrated. The pictorial and sculptural remains of ancient Egypt form, indeed, the most promi-