

quence of the pre-existing better nutrition, and hence readier functional activity, of the left cerebral hemisphere.

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Onondaga Folk-Lore.

UNTIL recently David Cusick's "History of the Six Nations" was the chief treasury of Iroquois legends, though much could be gathered from the writings of early missionaries and travellers. These, however, paid more attention to customs of life. Of late more care has been given to the collection of stories, and with fair results, but many old tales have been forgotten. Even so prominent a legend as that of Hiawatha was unknown to the whites fifty years ago, but it may not be very old among the Indians themselves. As a frequent visitor to the New York Onondaga Reservation, I have occasionally obtained some material of this kind, part of which has been published, and can only regret not doing this earlier.

The Onondagas have a strong belief in witches, and take precautions against them. A clear-headed and intelligent Indian told me that he met a spirit one night, and described its appearance. He took a good look at it, not being afraid, for, being a Christian, he was sure no spirit could hurt him. Supposed witches are avoided or placated, but are not now punished, though once they were put to death. I have been in an unfathomed cave on the east side of the reservation, where, it is said, a witch was cut to pieces, and thrown into the rocky cleft, many years ago.

Pygmies are supposed to live under ground, sometimes appearing to men, and their old abode was pointed out to me. They are the Che-kah-ha-wha, or Small People, of the Onondagas; the Yah-ko nen us-yoks, or Stone Throwers, of the Mohawks; and the Ehn-kwa-si-yea, or No Men at All, of the Tuscaroras.

The tale of the vampire, which caused a change in the mode of burial, was first published by David Cusick. The version given me differs somewhat from this and that of Mrs. Erminnie A. Smith. Leaving out the graphic details for another time, the story may be briefly told. A man and his wife, with their father, one night occupied a deserted cabin. As the fire went down, a skeleton form appeared, killed the old man, and began gnawing his body. This aroused the younger persons, and the skeleton retreated when they stirred up the fire. By stratagem they escaped one at a time, but were soon pursued. Their friends came to meet them when they heard their cries, and they were rescued. The people assembled, found a skeleton in a bark coffin in the house, resolved to burn it; and out of the flames came a red fox, which burst through their ranks, and disappeared in the forest.

The story of O-kwen-cha, or Red Paint, deals with the marvels of magic, in which the boy proved powerful. He saved his grandmother by overcoming the great wrestler, and brought an uncle to life. By destroying a giant he restored another uncle; and by overcoming a wonderful dog, a third. The fourth uncle was delivered by a longer and curious trial, and he returned home with them, to find his grandmother grown old. By an odd expedient he restored her young looks, twisting a stick in the loose skin of the back of the neck, until all the wrinkles were drawn out of her face. I found a resemblance, in one part of this tale, to a Canadian legend related by Mr Chamberlain. Red Paint arranged the scattered bones, and then pushed against a tree, crying, "Look out, look out! this tree will fall upon you!" The bones united, jumped up, and ran away. In the Canadian story the boy shoots an arrow in the air, with a similar exclamation and result.

It is unlucky to shoot at the white sea-gull, the bird of the clouds, or the one that never lights on the ground, for it dives in the air, and the hunter misses his aim. If he does this twelve times, on the thirteenth he will vomit all the blood from his body. This is the bird which destroyed Hiawatha's daughter, and not the white heron.

The Great Mosquito was an immense creature, and did much harm. One story relates that the Onondagas and Cayugas destroyed him, but with much loss to themselves. Clark ascribes the victory to Hiawatha, but the usual hero is the Holder of the Heavens. On the Tuscarora Reservation, near Lewiston, the stone

is shown on which he rested, and the tracks of pursuer and pursued were preserved near Syracuse, N.Y., until quite recently. The bird-like prints of the monster's feet were described to me, and the place of his death yet retains its early name. All the stories agree in making the small mosquitoes originate in the decaying body.

The Onondagas raise the old tobacco (*N. rustica*), and it is used for sacred purposes, though not restricted to them. When medicinal plants are sought, a little tobacco is strewn around the first one found, and it is left for good luck. A little bag of tobacco is attached to the wooden false face, when this is left long unused, and this still remains on the one I have. Tobacco was always burned with the white dog.

The False Faces form a society, somewhat like medicine-men, and are supposed to have magic powers. The old masks are of wood, and these are like those described one hundred and fifty years ago. Green Pond, a little west of Jamesville, is one of the reputed early resorts of the False Faces, their magic powers opening the rocky walls. They still have feasts of their own, and assist at others.

I have been often asked whether the curious silver brooches have any significance as emblems or charms. None at present, certainly. Originally made by white men, their manufacture at last passed into Indian hands, and they were used simply as ornaments. All my crosses had been worn by Pagans. I have many forms of these brooches, but they are becoming rare. They are circular, square, lyre-shaped, diamond-shaped, stars, single or double armed crosses, Masonic emblems, combinations of hearts and crowns, etc. Some persons have attached much mystery to these double-armed crosses, as though they were antique and rare. I have had a number from Onondaga Indians, who recently used them. Among many silver ornaments and brooches, I have had and seen but one brass brooch.

There are some wampum stories, and much that is curious in its use. The Iroquois had no true wampum until the Dutch came, but may have used colored sticks or quills. An Onondaga tale makes Hiawatha's wampum of eagle-quills, and ascribes the invention to him. He alone could call down the wampum bird.

Some of the old feasts and games are yet retained. Both Seneca and Onondaga snow-snakes are made, and much used; a boy often holding several in his hand, and throwing them one after another. The boys also use the javelin a great deal; and another favorite game with children is mumble-the-peg. Their name for violets signifies "heads entangled," the flowers being interlocked and pulled apart. Lacrosse has almost disappeared, base-ball taking its place. Among implements and ornaments I still find early forms; but they are fast being displaced, and some which I used to see cannot now be found at all. W. N. BEAUCHAMP.

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Osteological Notes.

CONSPICUOUS by its prominence, occupying the lateral regions of the mammalian cranium, and connecting these with the face by an osseous bridge, is the series of bones known as the jugal or zygomatic arch. As this arch presents many modifications in the various orders, for the full understanding of its morphology it will be necessary to trace out its correlations not only with the neighboring structures, but also with the habits and environment of the animal. Composed often of three bones,—the malar or jugal in the centre, flanked on either side by the zygomatic process of the squamosal and by the malar process of the maxilla,—the arch may be reduced to two, the process of the squamosal and the jugal, or the process of the squamosal and the post-orbital process of the frontal. The number of bones present depends upon the advanced or receding position occupied by the orbit, also upon the position held by the articulation of the mandible in relation to the orbital cavity, whether this be above, below, or on a level with it. Although the arch in certain cases is very imperfect, it can never be said to be entirely absent. The strength of the jugal arch, the most important factor in its existence, depends upon its line of direction, whether this be straight or curve!, and upon the amount and manner of this curvature; upon the number,