
The Celestial Bear

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THE CELESTIAL BEAR.¹

IT is probable that in no part of the world has the observation of the stars exerted a greater influence over religion and mythology than amongst the native civilized peoples of Central and South America. With the possible exception of the Pueblo Indians of our Southwestern States, the ruder tribes of North America have naturally shown much less progress in astronomical knowledge, but throughout their mythology the most beautiful legends are those associated with the heavens.

The two stellar groups which seem to have played decidedly the most conspicuous part in these legends are the Pleiades² and the Great Bear. Turning our attention to the latter group, we can easily imagine the astonishment of the early missionaries when they pointed out its stars to the Algonkians, and received the reply, "But they are our Bear Stars too."

The minds of these worthy men were already impressed by the discovery in other parts of America of native traditions of a deluge, a passage through divided water, and a hero miraculously born, as well as a ritual, including baptism, confession, communion, and the use of the cross as a sacred symbol. Doubtless, therefore, they regarded the identity of the Algonkian Bear and their own as only another proof that an apostle had at some time visited this continent. While that explanation is not tenable to-day, the interesting question remains as to what this identity does mean.

The answer is best found by an examination of the traditions associated with this stellar group. Its stars seem to have been called the Bear over nearly the whole of our continent when the first Europeans, of whom we have knowledge, arrived. They were known as far north as Point Barrow, as far east as Nova Scotia, as far west as the Pacific Coast, and as far south as the Pueblos.

Some tribes within these boundaries, however, seem to have called the group by other names. When we seek legends connected with the Bear, we find that in spite of the widespread knowledge of the name there is by no means a wealth of material.

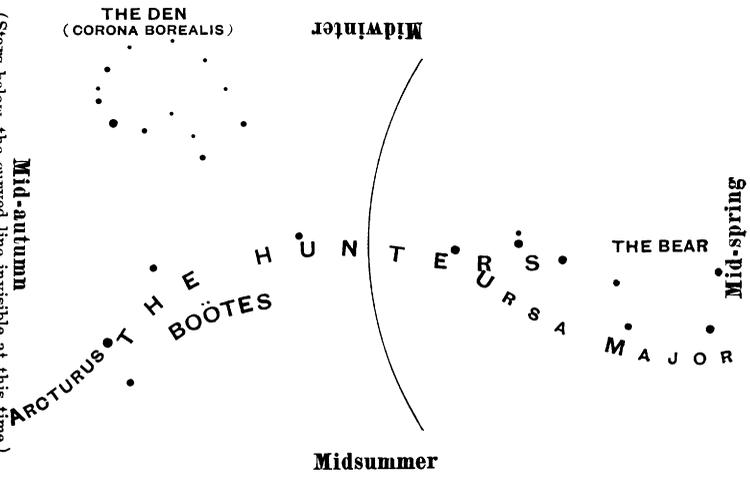
The best known legend is that common to the tribes of the Algonkian and Iroquois families. It has been related to me many times, in what is perhaps its most complete and extensive form, by the

¹ From papers read before the American Folk-Lore Society, Annual Meeting, December 28, 1899, and before the British Association for the Advancement of Science.

² See the researches of Mr. R. G. Haliburton, whose name will ever be connected with this group.

(Stars below the curved line invisible at this time.)

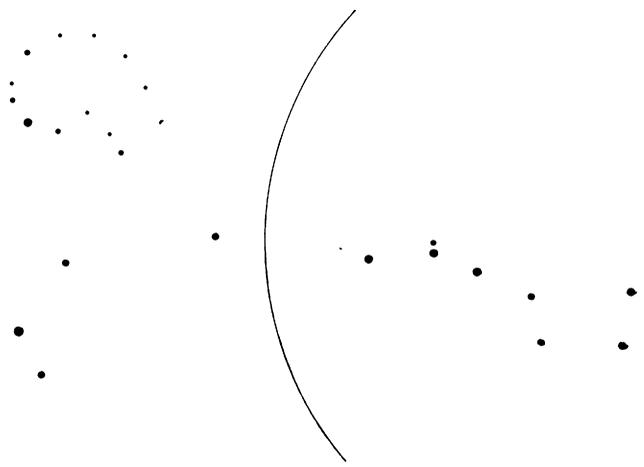
Mid-**autumn**



THE DEN
(CORONA BOREALIS)



Mid-**summer**



Micmacs of Nova Scotia, as we sat beside the camp-fire in the glorious summer evenings of that land, and they pointed out overhead the stars of which they spoke. Let us preface the legend with the following table :—

DRAMATIS PERSONÆ.

ENGLISH.	MICMAC.	SPECIES.	STARS.
The Bear,	Mooin,	Ursus Americanus,	$\alpha, \beta, \gamma, \delta$, Ursæ Majoris.
The Hunters,	Ntóoksooinook.		
The Robin,	Quipchowwéché,	Merula migratorius,	ϵ Ursæ Majoris.
The Chickadee,	Chügegéss,	Parus atricapillus,	ζ Ursæ Majoris.
The Moose Bird,	Mikhähgögwéché,	Perisoreus Canadensis,	η Ursæ Majoris.
The Pigeon,	Pülés,	Ectopistes migratorius,	γ Boötis.
The Blue Jay,	Wölöwéché,	Cyanurus cristatus,	ϵ Boötis.
The Owl,	Kookoogwéss,	Strix cinerea,	Arcturus.
The Saw-whet,	Köpkéché,	Nyctale Acadica,	η Boötis.
The Pot,	Wo,		Alcor.
The Den,	Mskegwööm,		μ, δ , Boötis.
			$\alpha, \beta, \gamma, \delta, \epsilon, \zeta, \theta, \kappa, \lambda, \rho$, Coronæ Borealis.

Comparing the above list with the accompanying chart, we observe that the Bear is represented by the four stars in the bowl of what we call the Dipper. Behind are seven hunters who are pursuing her. Close beside the second hunter is a little star. It is the pot which he is carrying, so that, when the bear is killed, he may cook the meat therein. Just above these hunters a group of smaller stars form a pocket-like figure — the den whence the bear has issued.

Late in spring, the bear waking from her long winter sleep, leaves her rocky hillside den and descends to the ground in search of food. Instantly the sharp-eyed chickadee perceives her, and, being too small to undertake the pursuit alone, calls the other hunters to his aid. Together the seven start after the bear, the chickadee with his pot being placed between two of the larger birds so that he may not lose his way. All the hunters are hungry for meat after the short rations of winter and so they pursue eagerly, but throughout the summer the bear flees across the northern horizon and the pursuit continues. In the autumn, one by one, the hunters in the rear begin to lose their trail. First of all the two owls, heavier and clumsier of wing than the other birds, disappear from the chase. But you must not laugh when you hear how Kop-kech, the smaller owl, failed to secure a share of the bear meat, and you must not imitate his rasping cry, for if you disregard either warning, be sure that wherever you are, as soon as you are asleep he will descend from the sky with a birch bark torch and set fire to whatever clothing covers you. Next the blue jay and the pigeon also lose the trail and drop out of the chase. This leaves only the robin, the chickadee, and the moose bird, but they continue the pursuit, and at last, about mid-autumn, they overtake their prey.

Brought to bay, the bear rears up on her hind feet and prepares to defend herself, but the robin pierces her with an arrow and she falls over upon her back. The robin being himself very thin at this season is intensely eager to eat some of the bear's fat as soon as possible. In his haste he leaps upon his victim, and becomes covered with blood. Flying to a maple-tree near at hand in the land of the sky, he tries to shake off this blood. He succeeds in getting all off save a spot upon his breast. "That spot," says the garrulous chickadee, "you will carry as long as your name is robin."¹

But the blood which he does shake off spatters far and wide over the forests of earth below, and hence we see each autumn the blood-red tints on the foliage; it is reddest on the maples, because trees on earth follow the appearance of the trees in the sky, and the sky maple received most of the blood. The sky is just the same as the earth, only up above, and older.

Some time after these things happened to the robin, the chickadee arrived on the scene. These two birds cut up the bear, built a fire, and placed some of the meat over it to cook. Just as they were about to begin to eat, the moose bird put in his appearance.

He had almost lost the trail, but when he regained it he had not hurried, because he knew that it would take his companions some time to cook the meat after the bear was slain, and he did not mind missing that part of the affair so long as he arrived in time for a full share of the food. Indeed, he was so impressed with the advantages of this policy, that ever since then he has ceased to hunt for himself, preferring to follow after hunters and share their spoils. And so, whenever a bear or a moose or other animal is killed to-day in the woods of Megumaage, Micmac Land, you will see him appear to demand his share. That is why the other birds named him Mikchagogwech, He-who-comes-in-at-the-last-moment, and the Micmacs say there are some men who ought to be called that too.

However that may be, the robin and chickadee, being generous, willingly shared their food with the moose bird. Before they ate, the robin and moose bird danced around the fire (*meskouadijik*), while the chickadee stirred the pot. Such was the custom in the good old times, when Micmacs were brothers all to all and felt it a duty to share their food together, and to thank each other and the Universal Spirit for their present happiness.

But this does not end the story of the bear, though one might think so. Through the winter her skeleton lies upon its back in the

¹ The only variation of this legend which I have heard from Yarmouth to Why-cocomagh, over three hundred miles distant, occurs at this point. According to it the robin is said to have fallen into the fire in which the bear was being cooked, hence the red burn on his breast.

sky, but her life-spirit has entered another bear who also lies upon her back in the den, invisible, and sleeping the winter sleep. When the spring comes around again, this bear will again issue forth from the den to be again pursued by the hunters, to be again slain, but again to send to the den her life-spirit, to issue forth yet again, when the sun once more awakens the sleeping earth.

And so the drama keeps on eternally. And so it is, the Micmacs say, that when a bear lies on her back within her den she is invisible even to those who might enter that den. Only a hunter gifted with great magic power could perceive her then.

When we attempt to interpret this legend, we cannot fail to be impressed by the singular fidelity with which its details present, often simultaneously, the habits of birds and animals and the movements of the stars. Such accuracy, it is plain, can only result from long and careful observations of the objects described, and, indeed, whoever is acquainted with even our northern Indians knows well that very little in nature that can be seen with the naked eye escapes their observation. Brasseur de Bourbourg, who, in spite of his reckless theories, knew the Indians well, has said that they do nothing without a reason for it, and his statement has been echoed almost word for word by several other authorities. Nor, he might have added, do they think anything without a reason for it. The Micmacs of to-day do not pretend to know why the four stars of their Bear were so called. They only say that they know the Celestial Bear never dies, because she is always in sight, and that is why her earthly descendants never die of natural causes, but only fall asleep each autumn and come to life again in spring. For all earthly animals are the descendants of the ancestor animal in the sky, and their appearance and habits are but the reflection of hers. In all things as it was and is in the sky, so it is on earth. It is the bear's apparent power of dying and coming to life again which has impressed the imagination of the Indians, just as, for an identical reason, they have been impressed by the serpent's habit of shedding its skin. Hence, and because of its general resemblance to man, especially when walking erect on its hind paws, the bear was regarded by the natives of this continent as a highly mystical and sacred animal, endowed with extraordinary powers. These facts are of interest because they may assist us towards a possible explanation of the question why these stars were called the Bear. But the zoological elements of the legend become of secondary interest when we begin to note how well it agrees with the movements of the stars. We are well aware that the four bear stars never set in our latitude, and that this is what the Indians mean by saying that the bear is always in sight. If now we turn to our chart and observe the position of these stars

in mid-spring, we shall see that the bear does actually seem to be climbing down out of her den (which appears higher up) to the northern horizon. The hunters, circling over her, prepare to start the pursuit.

Next, in midsummer the chart shows us the bear running along the northern horizon with the hunters following, as described. Then in mid-autumn we see her standing erect, prepared to defend herself from the hunters. All but three of these hunters, however, have disappeared below the northern horizon, together with the den, which, the Micmacs say, has been left behind in the pursuit. Now we see why only the first three hunters are called "the hunters who are always hunting." It is because only three hunters remain always visible in our latitude. The other four disappear below the northern horizon just before the bear assumes an erect position. This explains why these other four hunters are said to lose the trail just before the bear is overtaken; also why the moose bird is said to have been "last in at the death," having nearly met with a like misfortune. For at this latitude and season the moose bird star nearly touches the northern horizon; and that brings out the interesting point that this form of the legend could only have originated in the latitudes where we now find it, for north of 50° N. there would be *four* "hunters who are always hunting," while south of 40° N. there would be only *two*. Yet it is a noticeable fact that south of 40° N. we find three hunters connected with this group. Returning to our chart, soon after the bear assumes the erect position last referred to, she will be seen to topple over on her back "slain by the arrows of the hunters" who have overtaken her, just at the season when the earthly bears, now fattened in preparation for the winter sleep, become logy and are most easily killed by the hunter. Then it is also that the autumn foliage is painted with her blood. Finally, when midwinter comes we see her lying dead on her back in mid-sky, but the den has reappeared with the bear of the new year, lying therein, invisible. Thus this group of stars served to mark the divisions of the night and of the seasons for the Micmacs much as the position of the Pleiades marked them for tribes farther south, and as the stars of the beautiful Southern Cross marked them in Central and South America.¹

In a Blackfoot myth we read, "The Seven Persons (the Dipper) slowly swung around and pointed downward. It was the middle of the night,"² showing that they too marked time at night by the position of these stars. So the Zuñis tell, when winter comes, how "the bear lazily sleeps, no longer guarding the Westland from the cold of

¹ Almost everywhere the Pleiades seem to have been the preëminent time-markers.

² George B. Grinnell, *Blackfoot Lodge Tales*, p. 66.

the Ice gods, and the white down of their mighty breathing, and how, when the bear, awakening, growls in springtime and the answering thunders mutter, the strength of the Ice gods being shaken," the reign of summer begins again;¹ a story which demonstrates that in Zuñi mythology there was a marked association between the terrestrial bear and the seasons.

The Chinese say that in spring the tail of the bear (the Micmac three hunters) points east; in summer, south; in autumn, west; in winter, north,— a correct statement for the forepart of the evening.

The Basques are said to believe that when the Bear is above the pole the season is hot and dry, when below it, the season is wet.

The Ojibways relate how a southern star came to earth in the form of a beautiful maiden, bringing the water lilies. Her brethren can be seen far off in the north hunting the bear, whilst her sisters watch her in the east and west.²

Astronomically, this legend is of considerable interest, because the mention of stars in the four quarters of the heavens in connection with the stars of the Bear suggests that the Ojibways at some time were accustomed to mark their seasons, not only by the position of the stars of the Bear, but also by the rising and setting of various fixed stars. This supposition, if correct, would redound considerably to their credit as astronomers. They also saw in the Bear stars the figure of a fisher with an arrow sticking in his tail (the star Alcor).³

Continuing our interpretation of the Micmac legend of the Bear, the authorities of that tribe say that the first hunter was called the robin because that star has a reddish tinge, the second hunter the chickadee because its star is smaller than the others, the fifth hunter the blue jay because its star is blue. Arcturus becomes the owl because of its large size, and the star of the seventh hunter, the saw-whet, because its reddish hue suggests the brilliant red feathers which mark the head of that bird. This feature accounts for its birch bark torch mentioned in the legend. It must be confessed that the elements of this description do not appear altogether accurate. Possibly there has been some confusion in the naming of the stars. The choice of the group of stars which represent the den needs no explanation, for their alignment could hardly depict a den more accurately than it does. Admitting that this legend is of pre-Columbian origin, the two figures of the Bear and the Den show conclusively that even our northern Indians had divided parts of the

¹ F. H. Cushing in *The Song of the Ancient People*, pp. 39, 40.

² Mrs. Emerson, *Indian Myths*, p. 69 (quoting Copway).

³ Schoolcraft, *Hiawatha Legends*, pp. 121, 128.

sky at least into true constellations. Though the Bear was known to so many and so widely separated tribes, the Seven Hunters, so far as I have been able to ascertain, are peculiar to the Micmacs and the Iroquois. Elsewhere the group seems to be limited to the stars of our Dipper. The Den has been correctly pointed out to me by an Onondaga on the reservation near Syracuse, and Mr. John R. Swanton informs me that it is known to other tribes of the Iroquois. He adds that they sometimes call the star Alcor a dog instead of a pot. Such was its name amongst the Basques, the two front stars of the Micmac legend being two oxen which two robbers are driving off. These robbers are, in turn, pursued by the son and daughter of the owner with their dog.¹ The Cherokees of North Carolina assert that there is a den somewhere in the sky, but none of them could point it out to me.² The Iroquois Bear legend describes how a party of hunters pursue the bear, but a stone giant kills all save three of them. These three and the bear are carried up to the sky by invisible spirits and become stars. The first hunter pursues, with a bow, the second with a kettle, while the third is farther behind gathering sticks for the fire. In fall their arrows pierce the bear, whose blood tinges the foliage. She then becomes invisible, but reappears the following spring.³ When we add to this account the knowledge of the den, we see plainly that this legend is practically identical with the Micmac. The common origin of the legend seems beyond doubt in the case of these tribes, which have been in frequent contact with each other within historic times. The Housatonic Indians related the same story of the pursuit from spring to autumn and the blood-dyed foliage.⁴ In fact it is evident that the legend was known to all the intervening tribes between Nova Scotia and New York, probably much more widely. The Cherokees also knew the three hunters who pursue the bear. After killing him in fall they lose the trail and circle helplessly around till spring. The honey dew which is noticeable in fall comes from the bear's fat which they are trying out over a fire.⁵ It is worthy of remark that they know nothing of the hunters who are always hunting. In their latitude all these stars and even part of the Bear dip below the horizon. The use of such a phrase among them would be strong evidence of a migration or transmission of the legend from more northerly lati-

¹ Vinson, *Le Pays Basque*, p. 29.

² Sir William Dawson (*Acadian Geology*, p. 675), referring to the Micmac legend, locates the Den in Berenice's Hair. This is, I believe, the only mention of the Den in print.

³ Mrs. Erminie A. Smith, *Second Report of the U. S. Bureau of Ethnology*, pp. 80, 81.

⁴ R. H. Allen, *Star Names*, p. 423.

⁵ Stansbury Hagar, *Stellar Legends of the Cherokees*.

tudes. As it is, we may perhaps consider significant the mention of the lost trail, where there is no contrast with stars which do not lose the trail. Nor is it less suggestive that mention is made of the bear's fat, which is also referred to in the Micmac legend. It is substituted for the autumn foliage of the northern version, a singular example of the combination of like objects with dissimilar explanations, as if one had jumbled together the elements of a faintly remembered story. The Point Barrow Esquimaux recognized the stars of the Bear with the hunters around him,¹ the Zuñis call the group the Great White Bear of the Seven Stars;² and they seem to have played a not inconspicuous part in Pueblo mythology. Other names for these stars appear. The Blackfeet know them as seven boys, all of whom had been killed by their sister save the youngest (the star Dubbe), who killed her in turn.³ Another Western tribe knew the stars of Ursa Minor as a bear, its head being composed of "the three stars in a triangle," and its back of seven other stars.⁴ The Thlinkeet of the Pacific Coast seem also to have associated the Bear with the stars of Ursa Major.⁵ One Micmac informs me that his tribe once thought there was another bear hidden under the sky near the pole, and that the neighboring stars were hunters circling around in a vain endeavor to locate its den. This statement finds some support in Le Clerq's assertion that the Micmac Indians of Gaspé knew the constellations of both the Great and Little Bear and so called them. This author seems to give us the earliest reference to these groups in America. He adds that the Gaspé Indians said "that the three guardians of the North Star are a canoe in which three savages have embarked to surprise this Bear. But unfortunately they have not yet been able to overtake the animal."⁶ He makes no mention of the bird hunters, but such negative testimony means little. The worthy father paid scant attention to legends. He refers to only these two constellations, yet it is evident that the Micmacs named several other groups and related elaborate tales concerning them. Possibly in an older form of the legend the bird hunters were supposed to pursue the bear in canoes, though it seems unlikely that the Indians indulged in such mixture of attributes. Charlevoix wrongly supposed that the teachings of Lescarbot were responsible for the names Great and Little Bear.⁷ Other early mention of them is

¹ Dr. Franz Boas in the *Amer. Antiq.* vol. xviii. p. 121.

² Mr. Frank H. Cushing, statement to author.

³ R. N. Wilson in the *Amer. Antiq.* vol. xv. p. 200.

⁴ Rev. S. D. Peet, quoting Tanner in *Amer. Antiq.* vol. xvii. p. 123.

⁵ Dr. A. F. Chamberlain in the *Amer. Antiq.* vol. xvii. p. 70.

⁶ Père Chretienne Le Clerq, *Nouvelle Relation de la Gaspésie*, Paris, 1691, pp. 152, 153.

⁷ Charlevoix, *Travels in North America*, p. 297.

found in the works of Cotton Mather, 1712, and Lafitau, 1724. In Yucatan, Polaris was called the North Star, Star of the Shield, Guide of the Merchants.¹ Under the last title it is possible that this star was associated with Ekchuah, the god of travellers and merchants. *Ek* may be translated either "black" or "star;" the meaning of *chuah* seems to be uncertain.² Describing the worship of Ekchuah, Landa says: "Travellers carried with them on their journeys a supply of incense and a little pan in which to burn it; thus provided, in whatever place they might happen to be when night overtook them, they set three little stones upright in the ground, depositing upon each a few grains of this incense; before these they placed three other flat stones, upon which they poured more incense, and then [perhaps gazing at their ever faithful guide shining brightly in the northern sky] they addressed their prayers to the god whom they named Ekchuah, that he might grant them a happy return to their homes. This ceremony they repeated every evening until they were again seated on their own hearths; meanwhile those at home were doing as much or more on their behalf."³

In the classic mythology the same four stars formed the body of the bear as in the Micmac legend, but instead of the first three hunters a long tail was most inaccurately attached to the animal. According to Mr. Haliburton, an early English writer sought to explain this incongruity by supposing that Jupiter had stretched out the bear's short tail by holding that appendage while raising the animal to the sky. It is somewhat singular that the Oneidas believe that the bear originally had a long tail, which was frozen fast while he was fishing through the ice with it, and was alienated from its owner during his struggles to escape.⁴ The bear in certain Greek versions of the myth is identified with Callisto (Kalliste, the most beautiful, usually taken to be a form of the goddess Artemis). In some versions the animal is pursued by hunters.

We come now to the question why the same stars have been chosen to represent the bear and the hunters in so many and widely separated regions, when those stars suggest the form of a bear no more than that of any other quadruped, while almost any other stars would serve as well for hunters. We may at once dismiss the idea of coincidence. Even if the nature of the analogies connected with this star group were not sufficient in themselves to disprove such an explanation, a further comparison of the stellar legends of the In-

¹ Brinton, *Primer of Mayan Hieroglyphs*, p. 34.

² *Vide* Brasseur de Bourbourg, *Maya Dictionary*.

³ Landa, *Relacion des las cosas de Yucatan* (Brasseur ed.), pp. 156-159. See, also, Cogolludo, *Hist. de Yucatan*, lib. vi. cap. 6.

⁴ Martin Wheelock, a Carlisle student, in the *Red Man*, February, 1900.

dians — especially of Central America and Peru — reveals analogies to the star-lore of other continents so widespread, so numerous, and so striking that no room is left for chance. But may not these analogies have resulted from the teachings of the early missionaries and explorers? One objection to this is that everywhere alike the earliest writers state that these legends were related to them on their arrival as being already well known and long known. That some of the most important of these stellar legends of Ancient America are very old is beyond doubt. Let us also notice the marked disagreement in details which the most similar American legends reveal either in comparison with each other or with those of other continents. Had they sprung from recent teaching, or had they been of recent and single origin, they would surely have presented greater similarity. Again, the distribution of these analogies is too extensive to be accounted for by missionary teaching, and the internal evidence shows practically no element of European thought within the legends. Examined with reference to this point, the Micmac Bear legend is markedly primitive. The only feature to which suspicion can possibly be directed is the pot in which the bear meat was cooked. It is probable that the Micmacs knew how to boil their food in pre-European times, either in stones which they hollowed out or in the birch bark dishes which I have seen them manufacture and use for this purpose in the woods. There is reason to suppose that they boiled many of their medicinal preparations long before the coming of the whites. *Wo*, their word for pot, seems to be purely native in origin.

Let us pass on, then, to the real question which confronts every inquiry into the cause or causes of the numerous similarities which exist between the continents in human thoughts, habits, and customs. Did these similarities originate independently, or were they transmitted from one continent to another in times so remote that not only all memory of a common origin has been lost, but other peoples have intervened who knew nothing of these analogies? Beyond doubt, as some authority has well put it, the fact that primitive peoples on different continents build wooden huts is not evidence that one has taught the other, for everywhere it rains, everywhere man is by his nature impelled to construct a shelter, and generally wood is the most available material for that purpose. In other words, like causes acting independently on the mind of man (which is everywhere the same) produce like results. It is this principle which, applied to such subjects as the world-wide story of the solar hero, for example, offers such a plausible explanation of its numerous and striking analogies. Just in proportion as the concepts involved in these analogies are of a general nature — *i. e.* dependent

on world-wide causes and producing world-wide effects — the probability that they are rightly explained by this theory of independent origins is increased, and in matters similar to the wooden huts we are, of course, practically certain that it is correct.

But, on the other hand, as the nature of the concept narrows, and the element of individualism or of arbitrary choice increases, it becomes more and more difficult to explain analogies on this basis. It is for this reason that those scholars who have studied the similarities in the star lore and constellations of the different continents, while by no means denying the probability of independent origins for general analogies, have almost unanimously declined to accept that explanation as a solution of their difficulties. For many of the concepts in the stellar legends are of such a purely arbitrary character as to seem quite beyond the reach of explanation by general laws. One needs no better example of this than is supplied by noting the forms of our constellations and the degree of imagination required to see in the star groups the figures which are assigned to them. Reinforce this observation with the question as to how many other shapes your imagination would apply to the stars in question with equal readiness, and then, I think, the force of a similar or identical name applied to those stars on different continents will hardly suggest independent origins. But this must not blind us, on the other hand, to the difficulties in the way of transmission between the continents, such as intervening oceans, arctic climates, and dissimilarities in other concepts which apparently should also have been transmitted if communication took place. Most of these objections can be met, but not in a space reasonable for the purposes of this paper. I am acquainted with but one attempt to explain the identity of the Bear stars on the basis of independent origins. This supposes that they were so named independently because they are the most conspicuous group near the pole, and the bear ventures farther north than any other familiar animal. But this would imply transmission south as far as the Arabians and the Zuñis from the very few tribes who have ever reached a point far enough to the north to have observed this fact. Again, the stars of Cassiopeia are not appreciably less conspicuous nor less far north than those of Ursa Major. The Micmac legend, however, suggests another method of explaining this particular analogy on the basis of independent origins. It is that the primitive hunter from thirty degrees of latitude northward used these stars as a compass and timepiece by night, because their position was peculiarly well adapted to serve these purposes, for they were high up in the sky, during the greater part of the time, yet sufficiently low to indicate direction and — most important of all — rarely or never invisible on a clear night. Observa-

tion suggested to his mind that four of these stars look like a four-footed animal seen in profile, but what animal? Gradually he may have noticed that the alignment of certain stars behind them resembles the form of a den, that the animal seems to be descending from this den in spring just when the bears, which he had hunted, descend from theirs, that it falls over in autumn just at the time when bears are most easily killed, etc. In a sentence, he then noticed all the similarities between the positions of the stars and the habits of the bear which the Micmac legend so faithfully portrays, and these similarities once noted, when he again asked himself the question, "What animal do those four stars represent?" the answer came readily, "It must be the bear, because *its stars act so like a bear*, and besides there is its den; no other animal has a den of that shape." This is a general concept. It would be quite as likely to be reached by a native of Europe or Asia as by a native of America, for in equal latitudes on all those continents the positions of the stars have the same relations to the habits of the bear. It is almost certainly the true explanation of the naming of these stars by the Micmacs; whether it explains the name elsewhere is for the reader to judge. If it does, the argument for intercommunication loses a promising example, and must meet the question: why may not other seeming instances of intercommunication be explained on a similar basis? But it will be observed that the farther south we go the less marked become the seasons, and therefore the less satisfactory becomes this explanation. It may also be objected to this explanation, as applied to the classic Ursa Major, that we have no evidence that these stars were ever associated with the seasons in the parts of Europe and Asia where they were so called. If this statement be correct, we can only suppose that this association was forgotten there when advancing civilization diminished both the necessity for hunting and the number of the bears. But at least both the mythology and the grouping of the classic constellations indicate that the pursuit of the bear was the main concept in Ursa Major and Boötes. Such are a few of the points of interest connected with the legend of the Stellar Bear, after all only a small chapter in the grand and wonderful book of stellar mythology.

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