

THE PERCHED BOULDERS

GLACIER OR MAN-MADE IN THE NORTHERN HEMISPHERE?

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“I find it difficult to distinguish the North American examples from the European ones and believe that both sets were produced by ancient builders who shared a common culture.”

(B. Fell, “Bronze Age America,” 1982)

“These connections between temperate and arctic peoples imply that the similarities between the ancient Lapps and Algonquin Indians may result from major cultural diffusion which took place many thousands of years ago.”

(J. Mavor, B. Dix, “Manitou: the Sacred Landscape of New England’s Native Civilization,” 1989)

DISTRIBUTION AND HYPOTHESES

This article is intended to acquaint readers with concepts surrounding the distribution, origin, and associated cult of perched boulders, objects which remain a large riddle in both of the world’s hemispheres. The two basic theories concerning the formation of perched boulders are that they were created by glaciers, or were man-made. They are distributed in Ice Age areas of North America and Europe. Pedestal and perched boulders can have one, two, three, or more supports. Rather frequently, boulders are placed in such a way that they can shake. In some areas, perched boulders have special place names. It is interesting to note that the quantity of boulders in Europe decreases from North to South, according to the course of the glaciers.

The challenge in this study is to determine how to properly compare obvious attributes of boulders in order to determine if they were glacier or man-made. Asking the right questions is essential if we are to obtain needed clues as the boulders’ creation:

- ▶ What are the origins of the *cults** associated with perched boulders?
- ▶ What were the reasons or purposes for erecting perched boulders?
- ▶ Is there an ethnographic similarity among the native peoples in these regions?

There are three hypotheses which postulate the origins and similarities of perched boulders in regions of the Northern Hemisphere as being the result of:

1. Natural glacial action.
2. Long-distance migrations of native peoples during other climatic ages.
3. Independent parallel development.

Glacial action could create perched boulders. But glaciers could not place stones in obvious systems and

* For clarification, throughout this paper the term “cult” will be used in the context of referring to a belief system.



BLACK PERCHED BOULDER AND “ALTAR” IN ICELAND (MYRDALSSANDUR)



QUARTZ “LEG” UNDER PERCHED BOULDER (KIVAKKA, KARELIA)



TWO PEDESTAL BOULDERS IN LINE (LAPLAND, COAST OF BARENTS SEA)



SUPPORT IS HANGING, HELD ONLY BY WEIGHT OF BOULDER (VOTTOVAARA, KARELIA)

PERCHED AND PEDESTAL BOULDERS IN ARCTIC EUROPE. PHOTOS: AUTHOR, SUMMERS 2004-06.

geometric arrangements such as circles, lines, squares, and triangles. Perched boulders in Lapland and Scandinavia form not only small systems, but also large complexes. Hundreds and thousands of perched boulders sit atop mountains in Lapland: Kivakka, Nuorunen, Dvoynaya, Vottovaara (“Dead-mountain”), Kuzova islands, etc. These complexes consist of perched boulders, and exhibit geometric features as well, including lines and circles of stones, split-wedged rocks, cairns, etc. It would be illogical to assume the creation of such complexes by a glacier in Europe and America.

Perched boulders have common attributes of reasonable installation, reasonableness of a place within a landscape, and other identical designs. These attributes argue against a glacial creation hypothesis.

In Europe the cult associated with perched boulders is seen in Lapland most of all. There, as well as in Karelia and Scandinavia, these stones have special names:

- ▶ In Russian Lapland (Kola peninsula) they are known as flying rocks, *seid/ seide** (spirit).
- ▶ In Norway (Finnmark), as *sieidi*.
- ▶ In Sweden as tables of gods, “laying hen” stones, displaced boulders (Swedish researcher Sven Hallerdal has defined “laying hen” as a boulder on 3-5 small stones).
- ▶ In Finland as table-stone (*kivi-poyta*), *seita*.
- ▶ Modern English literature names include *dolmen* (an incorrect name based on external similarity), tripod rock, pedestal, and perched boulder.

Separate perched boulders, except for the common name *seid* (spirit living in boulder) have their own names:

- ▶ In Russian Lapland they are known as “Deer ancestor boulder,” “Bread boulder” (Y. Vize, 1911), and *Rept Kedgi* (name by *Sami shaman*) (N. Haruzin).

* *seid (seide)* - this term has two meanings: one concerning sacred natural objects in rivers, mountains, lakes, unusual rock formations, etc. , and the other referring to megalithic structures, perched and pedestal boulders, anthropomorphous stone piles (such as the *seid* Kavray, Kola Peninsula). The term of *Seid* frequently concerns humaniform stone figures. It correlates the concept of the Lapps *Seid* with similar stone terms of *inuksuit* (Inuit) and *manitou* (Algonquians) in North America.

- ▶ In Sweden as *Trollstenen* (Troll boulder), *Runkestenen* (Shaking boulder), and *Klockestenen* (Bell boulder) (B. Westling, 1995).



LAPLAND SEID (TRIPOD ROCK / PEDESTAL BOULDER) IN NORTHERN LAPLAND. PHOTO BY THE AUTHOR, SUMMER 2005

In Lapland legends, after death a shaman’s soul goes into the boulders. Sami people brought in offerings to boulders in the form of food, metallic subjects, stones painted with the blood of animals, and body parts of animals (wings of birds, etc.). Around the *seid* stone there was a space forbidden for visiting. In seventeenth and eighteenth century legends of the Kuzova Islands in the White Sea, *seid* stones were characterized as “enemies which have turned into a stone” (historically, Swedish warriors of the sixteenth and seventeenth centuries). In ancient Sami tradition, the perched boulders could fly and were mentioned as “the flying stones.” The Sami people have kept a primitive cult of perched boulders.

In Europe, the main hypothesis dealing with the cult of boulders is borrowed from the megalithic tradition (the dolmen structures) in Western Europe. The cult was distributed to the North from the southern Scandinavian peninsula.

Scholars of Russia, Finland, and Sweden have dated the perched boulders to different epochs:

- ▶ Southern Sweden to the Bronze Age, 1500-500 B.C.
- ▶ The complex on Vottovaara Mountain, 500 B.C. - A.D. 1500 (dating by M. Shahnovic).

- ▶ *Seids* in Karelia, minimum 2000-0 B.C. (dating by I. Melnikov).
- ▶ U. Salo, Bronze Age, 1500-500 B.C. (University of Turku, Finland).
- ▶ Northern Finland, Komsa culture, 7000-3000 B.C. (Shumkin 1994).

The most intriguing riddle of all is the similarity of the perched boulders and other designs in Northern Europe and America. Two schools of thought explain this similarity: those of parallel development and diffusion. The diffusionist concept was the most popular version, but seemed to provide too simple an answer to a difficult question. Hypotheses about transfers of knowledge between Northern Europe and America as related to the perched boulders must be considered in the context of antiquity. Do similar stone structures mean similarities among the native peoples? Is there ethnographic information to support such a conclusion? It is not necessary to examine disputable artifacts, but rather to carry out broader research in order to arrive at accurate answers.

Ethnographic Digression

Are there similarities among the ancient peoples living in megalithic regions of Northern Europe and America? Ethnographers have identified commonalities between the ancient Finno-Ugrians (*Sami, Lapps*) of Lapland and Algonquians in the Northeastern United States:



"SQUARE ALTAR." DESIGN REPRESENTATIVE OF PERCHED BOULDERS PLACES. LAPLAND. (PHOTO: AUTHOR, SUMMER 2004)



A FUNCTIONAL PRINCIPLE: MINIMUM CONTACT AREA OF PERCHED BOULDER AND BASE ROCK. CUP SHAPED "LEG". FINLAND GULF COAST. (PHOTO: AUTHOR, SUMMER 2005)

1. Lowie, Tylor, Thalbitzer, and Halowell cite much in common between Sami (Lapps) and Indians of Northeast America (Eliade 2000; Mavor and Dix 1989, pp.244-245). Figures on Lapland *runebom* (ritual drums) are similar to pictographic styles of the Eskimos and Eastern Algonquians (Eliade).
2. There are commonalities in the singing of Shamans of Lapland and Northern America (Eliade).
3. American Indian "sweat houses" compare with Finnish saunas (Eliade).
4. Similarities exist in rock carvings in Finland, Norway (Alta), Karelia, and areas around the Great Lakes of America (Paabo, *The Origins and Expansion of Boat-Oriented Ways of Life* 2002-2003).
5. Similar Mesolithic epoch artifacts of Komsa (Norway, Finnmark, and the Russian Kola peninsula) and Dorset (Northern Canadian) cultures exist.

Similarities between Lapland and American Indian peoples are numerous. In popular literature, the Lapland peoples were called "Indians of Europe." Similar megalithic traditions complement that general view. That the complex ethnographic, natural, and megalithic similari-

ties point to diffusion is reinforced by an opportunity for migration between continents during the Mesolithic - Late Stone Age (approximately 6000-3000 B.C.). This period (Middle Holocene: Atlantic - Subboreal Ages) is known also for its favorably warm climate in Northern regions.

The parallel development hypothesis suggests that similarities among people and cultures have arisen in different regions independently during the evolution of their ancient traditions. In assessing this hypothesis it is important to consider the roots of perched boulder cults.

ROOTS OF CULT: NATURAL AND GLACIALLY MOVING PROTOTYPES, EVOLUTION, FUNCTION AND SYMBOLISM, STYLES.

Researching the theory of parallel development may allow us to determine the facts behind the occurrence and evolution of a cult. In doing so, it will be necessary to search for clues to questions about the origin of a cult of boulders in the context of their surrounding landscape. Landscape was one of the primary influences in the consciousness of ancient people. It is clear that the landscapes of similar regions of Europe and America were created by glacial action. One could then logically deduce that the initial location of perched boulders revered by a cult can be the natural placement made by a glacier. Unusually sited boulders could be interpreted as “dwelling of spirit” for the ancient native people. The natural placements could serve as initial points for creating a cult worship site.

Some balancing boulders have unusual sound properties. In Karelia and Russian Lapland unsteady boulders, “ringing” on a wind, have place-names *kolg/kalg* (bell). Examples of such “ringing” sacred places are found on Kolgostrov Island on Onego Lake, Kolgostrov Island on Vodlozero Lake, Kolgevaara Mountain, Cape Kolganpya, and the Kalga River.

In examining the distribution of traditions, the external attributes of perched boulders—such as the number of support “legs”—are not as important as are the principles governing the balancing of stones. Many stones were intentionally established so as to be unsteady and unbalanced to the point of almost falling. By modern construction standards, the idea of unstable construction is strange, but there is a valid explanation for it: such properties were a necessary part of ancient ritual

practices. Similarities in the number supports found beneath the boulders are simpler to explain as being the result of the copying of religious traditions, not unlike the symbolism of the Christian cross symbol which derives from the crucifixion of Jesus Christ.

All perched boulders cannot be attributed to glacial action, but it is possible to assume that glaciers created many of the prototypes. It is also possible to assume that unusual formations of perched boulders within a given landscape may be the result of human intervention. The movement of native people through migration distributed various styles of stone installations, with similarities in styles being the most ancient, while differences in designs the result of cultural evolution. These stylistic distinctions serve as a trademark of the megalithic region which is the subject of this discussion. It is interesting to note a cult involved with quartz. Quartz frequently was used in rituals, with white pieces of quartz found on perched boulders, atop cairns and mounds, and at the center of stone circles. There are quartz perched and pedestal boulders. Perched boulders stand on bands and lines of quartz. Many boulders have quartz spots and patches. The quartz cult probably arose in the Mesolithic era, when there was a qualitative revolution in use of this material. Processed pieces of quartz are frequently found within ancient sites, indicating that it was also used in everyday life as well as for its sacred connotations.

The following features of perched boulders and their landscapes are relevant:

- ▶ Perched boulders settle in areas exposed to glacial action in Northern Europe and America.



THIS PERCHED BOULDER IS HUGE. IT BALANCED STANDING. DVOYNAYA MOUNTAIN, LAPLAND. (PHOTO: AUTHOR, SUMMER 2004)

- ▶ Around boulders we frequently find other man-made designs and structures (stone lines, piles, rock on rock, cairns etc.).
- ▶ Arrangements of boulders in Europe and America have an identical landscape context (placement on bedrock, inside of cracks in rocks, ravines, and other unusual natural features).

The evolution a cult of perched boulders can be presented as having occurred in two stages:

1. **Copying natural prototypes, at observance of functional properties.**

The important principle of perched boulders construction was in its instability. The boulders should have been balancing and teetering. Some boulders vibrate and issue sounds under certain wind conditions to this very day. Others can be shaken by a single man. They stand and shake, but do not fall. One can speculate that people learned of the acoustic properties of boulders during post-glacier period earthquakes. The perched boulders could react to earthquakes by moving and emitting sounds. The ancients might have interpreted that as a “vote of spirits from the Underground World shaking Rocks.” Many boulders today are motionless. A century after glacial recession from Northern areas all became quieter. For the advocates of man-made perched



QUARTZ PEDESTAL BOULDER IN NORTHERN LAPLAND. THE SUPPORT OF THIS CONSTRUCTION A DIFFERENT/CONTRAST COLORS. (PHOTO: AUTHOR, SUMMER 2005)

boulders, the ancients might have intentionally placed them in geologically active places in the post-glacier epoch, such as Kivakka Mountain—site of a tectonic break—and Vottovaara Mountain—the epicentre of an ancient earthquake.

2. **Symbolical copying “from a sample.”**
 The functional properties were gone, with the stones representing only “primitive spirits of stone.” It is possible to consider this period a “symbolical age.”

Thus, ecological conditions have determined the post-glacier age occurrence, development, and fading of perched boulders cults. If prototype perched and pedestal boulders left by the glaciers in Northern Europe became the roots of associated cults, is it possible to suppose that the dolmen of England and France were influenced by Scandinavian traditions rather than those of the Atlantic coast of Europe?

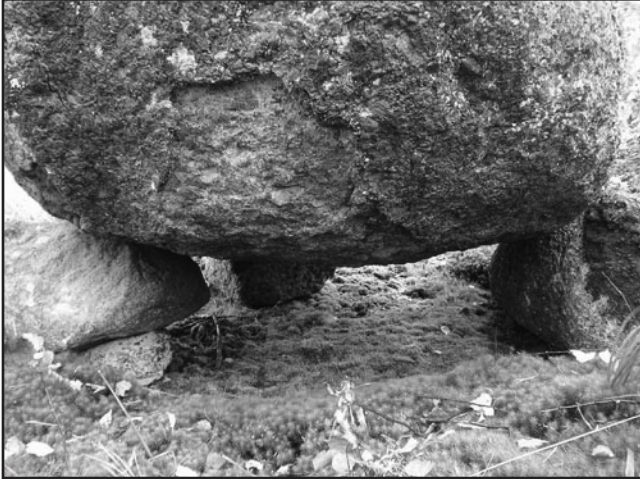
In the Northern Hemisphere, locations of boulders include Northern Europe, Northeast America and Southeast Siberia (*Altay, Northern Korea, Manchuria*). Continued research into the features of perched boulders in these regions doubtlessly will bring many surprising revelations and conclusions.

FEATURES: COMPLEXES, FIGURES, SYSTEMS, LANDSCAPES, AND NATURAL STRUCTURES.

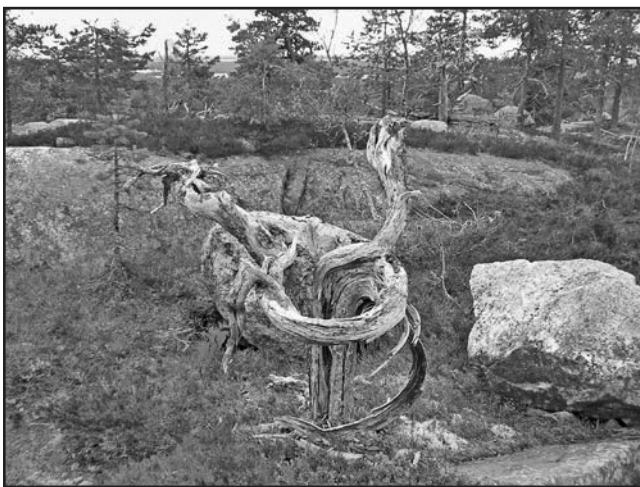
Perched boulders frequently settled down by groups and formed large complexes. One such complex is on Vottovaara mountain in Karelia (Russia):

“On the Mountain Vottovaara it is 1148 stones makes up 116 groups [sic]. The stones with ‘legs’ amount to about a third of the legs [and the number of legs] varies from 1 to 11. Almost half of the stones with legs have only one leg - 184. The number of the stones with two or three legs is nearly the same. The cult complex is (in a triangle 2 x 1.7 x 1.5 km, about 6 km² in area) [and] occupies the whole mountain and several other hills next to it.”
 (Mark Shahnovic 1995)

The Vottovaara perched boulders site was discovered by Sergey Simonyan in 1978 and was studied by archaeologist Marc Shahnovic in 1992. On the Kola



TRIPOD ON FINLAND GULF COAST: EROSION DEFECT ON SURFACE OF STONE AND “DOUBLE LEG”, LEFT ON PHOTO. (PHOTO: AUTHOR, AUTUMN 2005)



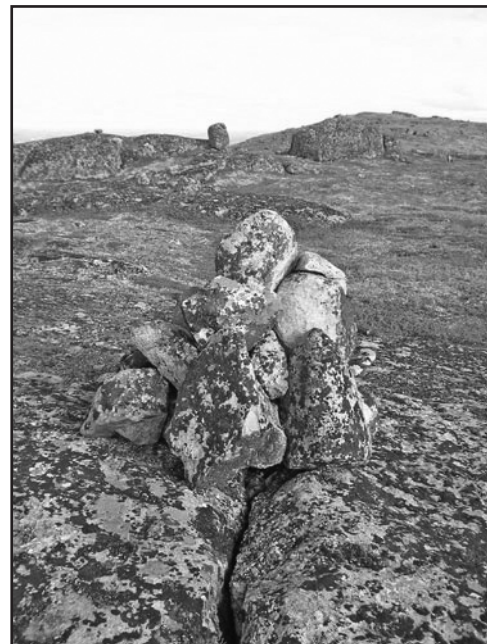
SACRED BACKGROUND: STRANGE TREE IN ANCIENT CULT PLACE. VOTTOVAARA, KARELIA. (PHOTO: AUTHOR, SUMMER 2004)

peninsula the complex on Dvoynaya (*Dvugorbaya* – “the double tops mountain”) mountain there are about 2800 perched boulders (calculation by Vl. Troshin, Murmansk). About same amount of boulders are found at the complexes at Teriberka and Liinhamari. In Karelia, to the south of Lapland on Kivakka and Nuorunen Mountains, are 50-100 perched boulders. On Kivakka the boulders “hang” on the walls of a ravine. On the Kuzova Islands in the White Sea there are about 500 perched boulders. The Kuzovas perched boulders complex is located near another type of megalithic structures—stone labyrinths. The complex on the Kuzova Islands was discovered by archaeologist A. Mullo in 1968.

A perched boulders (*seid-stones*) cult is an ancient Sami (*Lapps*) tradition. The ancient people moved these stones, but did they modify surfaces of perched boulders? Almost all of the boulders have no traces of having been modified. Evidently, the very few that do show traces of modification were not altered to change their appearance. Rather, material was removed from surface areas below the boulder, likely to regulate their center of weight in order to create the desired state of unbalance. For the ancient people it was easier to find a suitable boulder, than to process the surface of one.

The attributes of large megalithic complexes include:

1. Located on “bald” mountains, at heights of 100-600 meters above sea level.
2. Placement on mountain plateaus near to small lakes.
3. Found near split rocks.
4. Systems of boulders, frequently aligned with ravines, or arranged in circles (squares in North Lapland, triangles in Sweden) (Chrnolussky 1972).
5. Weight of individual boulders from five kg up to 60 tons.



STONE CAIRN ON SPLIT ROCK: DVOYNAYA MOUNTAIN, LAPLAND. (PHOTO: AUTHOR, SUMMER 2005)

The accommodation of stones within a given landscape helps us understand the sacred purposes of megalithic complexes. Groups of boulders were put in places which have unusual natural features. Complexes have base points around which one finds standing perched boulders. Natural features include:

- ▶ plateaus.
- ▶ tops of mountains.
- ▶ lakes.
- ▶ unusual rock formations.
- ▶ ravines and cracks in bedrock.

These locations speak to the religious dominance of natural features over those which are man-made, and contribute to an understanding of the native people. They were reading the landscape and adapting the natural surroundings for ritual use.

STYLES: SIMILARITIES AND DIFFERENCES / ARCHITECTURE OF PERCHED BOULDERS

The phrase “architecture of perched boulders” is a conditional name given to a set of identical forms and variants seen in the construction of Lapland *seids*, as found in various places remote from one another. As a result of research into perched boulders in Lapland and Scandinavia, it has become possible to identify specific styles and characteristics applicable to specific geographic areas. Some examples of styles include:

- ▶ Vottovaara Mountain - the support “hanging,” kept only under the weight of the boulder.
- ▶ Northern Kola peninsula - “swing,” with one small support under the center of the boulder and two on each side.
- ▶ Finnish gulf Islands (Baltic Sea area) - the boulder rests against a lateral side support, instead of laying on a support.
- ▶ Dvoynaya Mountain - support “overturn,” inclining a boulder downwards on a slope of rock.
- ▶ Kivakka Mountain complex - “L” shaped support.

The above is not a full list. Those designs which on initial survey seem to be chaotic orientations are, too, configured so as to be subordinated to certain attributes. The standard systematization of perched boulders divides them by quantity of support, external forms, etc.



CRACKED BOULDER ON “LEGS”. NUORUNEN MOUNTAIN, KARELIA. (PHOTO: AUTHOR, SUMMER 2005)

In my opinion, these are only external attributes. There are, in fact, rules of construction for perched boulders of identical form. For example:

- ▶ Spherical stones have supports under the center.
- ▶ Boulders of the cubic form stand on one support under a side (style “cube on edge”) and are widely distributed. This basic pattern has been noticed in Karelia, Kola Peninsula, Sweden, etc.
- ▶ A rare configuration is the “perched boulder on pedestal boulder” (found in Dvoynaya, Teriberca, Vottovaara).
- ▶ Support stones and boulders should be of different colors.
- ▶ Support and boulders have minimal contact area.
- ▶ Supports are frequently placed with a corner downwards.
- ▶ Boulders were always put on rocky surface.
- ▶ Stones chosen for perched and pedestal boulders frequently have defects (cracks, spots and patches, erosion) and unusual form. The unusual forms of boulders frequently make a strong psychological impression, even on modern observers.
- ▶ Especially esteemed were split boulders, with both parts of the cracked stone standing on “legs.”
- ▶ In large megalithic complexes near perched boulders, other designs (“additional constructions”) consisting of stone heaps, cairns, lines and circles of stones, square altars, etc., are found.

The styles demonstrate advanced traditions existing over generations, and the creative approach used by the native people in designing their ritual sites. Perched boulders are not only cult objects, but also excellent examples of pre-historic art.

EXCEPTION: In the USA there are two unique pedestal boulders, in Stephentown and North Salem. Obviously they reflect the genius and greatness of the native engineers. It was necessary to put these boulders not on a rock, but on the ground. The dilemma was how to ensure that the minimal area of support would guarantee basic stability? The boulders were put in an optimum configuration: the boulders lay on five supports at the corners upwards. It guaranteed the minimal area of contact and also that the supports will not sink in the ground under the weight of the boulder. The beautiful design decision speaks to the professionalism of the ancient builders.



SPLIT-WEDGED ROCK. VOTTOVAARA MOUNTAIN, KARELIA. (PHOTO: AUTHOR, SUMMER 2004)



SYSTEM: STONES CIRCLE AROUND SMALL PERCHED BOULDER. VOTTOVAARA MOUNTAIN, KARELIA. (PHOTO: AUTHOR, SUMMER 2004)

CONCLUSION

In conclusion, it is possible to present several basic theses concerning perched boulders:

1. Perched boulders in the Northern Hemisphere could have prototypes of natural and glacier erratic stones.
2. The complexes of boulders undoubtedly are man-made.
3. It is reasonable to assume that a transfer of cult knowledge between Northern

Europe and America occurred at an early stage as a result of transoceanic migration.

4. The meaning of boulders is determined by common functional principles.
5. Research has shown a connection between perched boulders and unusual landscapes or geological features.
6. The forms and designs of perched boulders constitute their “architecture,” with certain principles and rules common for all areas.
7. All hypotheses discussed previously have merit, as pertains to the origins, similarities, and differences of perched boulder sites:
 - ▶ **BEGINNINGS:** Glacial action created natural prototypes providing the roots of Northern tradition.
 - ▶ **SIMILARITIES:** A “diffusionist period” of early cultural development, possibly including transoceanic contact during a warm climatological time (approx. 7000-3000 B.C.).

- ▶ **DIFFERENCES:** A time of “parallel development,” occurring during a cold and deteriorating climatological period, and resulting in a break of common roots and subsequent independent development while preserving basic principles (after about 2000 B.C.). ■

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ERRATA to “A Case for the Use of Above Surface Stone Constructions,” by Edwin C. Ballard and James W. Mavor, Jr., *NEARA Journal* (Vol. 40 No. 1, summer, 2006):

Clarification on p. 8—para starting, “The Munsee/Mahigan...”, last sentence should read: “The ceremony was performed in mid-January and a depiction of the Bear cycle was laid out on the floor of the House (the tail of the Dipper crosses the meridian in early evening about January 15, a prelude to the Bear returning to the sky).

Correction—Delete last two sentences on p. 7 starting with, “A review of astronomical tables...” and the balance of the top para on p. 8 starting with, “...caused by...” and ending with, “...not available at present...” and substitute with: “For the local latitude, a review of the Astronomical Tables shows that 1000 years ago the Dipper's tail was 4.38 degrees higher in the sky at it's lowest point. Due to precession, a slow drifting of position in the sky caused by the wobble of the Earth on it's axis, it has dropped to it's present position at a rate of about ½ degree per 100 years. This suggests that for an observer sitting in the “U” and facing north, the azimuth of the “U” at 6 is pointed ½ degree higher in the sky than the lowest position of the Dipper tail today. This suggests that “U” 6 was constructed about 200 years ago. The viewing angle of the “U” at 7 is 2.78 degrees higher than the “U” at 6, suggesting that it was in place about 600 years earlier, or about 800 years ago. Without excavation, other methods for accurately dating these stone constructs are not available at present.

Ted Ballard