

Lights and Shadows in Cultural Astronomy

Proceedings of the SEAC 2005, Isili, Sardinia
28 June to 3 July

Editors: MAURO PEPPINO ZEDDA and JUAN ANTONIO BELMONTE



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Assessorato agli Affari Generali

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Presidenza Consiglio Regionale Sardo
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On the Possible Astronomical Significance of Lithuanian Autumn Goat Ceremony

JONAS VAIŠKŪNAS

Goat ceremony

Nearly up to the middle of the 20th century the shepherds of Latvia and Lithuania performed a ritual with a goat. The stated purpose of the ritual was to get it to snow as soon as possible for that would mean the end of shepherds' work. The ethnographers J. Elisonas (1930, 117-126) and B. Buračas (1933, 1023; 1943, 4; 1993 114-118) described this custom which they called "the goat ceremony". Based on these pre-war ethnographic materials and additional information collected by us we can summarize the content of this ceremony as follows:

1. At the end of October or on the first days of November shepherds used to choose a white goat (sometimes a sheep, or a white horse is mentioned) and take it to a birch tree.
2. Sometimes they decorated the goat with herbs, flowers, pine or fir tree branches, colourful pieces of papers or rags.
3. Sometimes they made a fire by the birch (Buračas 1993, 117).
4. One shepherd would climb the birch and preach a sermon asking for the winter to come, which would mean the end of their troubles.
5. Other shepherds would take the goat around the birch three times, in the direction of movement of the sun (clockwise).
6. During the ritual it was necessary to lift the goat up. Sometimes they bent the birch over, tied the goat to it and lifted it to the very top of the birch.
7. It was also very important that the goat bleat loudly. They expected to cajole snow from God.

Here are a few ethnographical descriptions of the goat ceremony (GC):

- ¹ "When autumn comes, shepherds catch a goat and lead it around a birch, in the hope that it will snow. Then one of the shepherds climbs the birch and crosses himself while saying the words: "In the name of darku (?), maggies in the birch, here are sins, here nonsense, here's the evil temptation". Then he crosses himself and starts preaching a sermon. The other shepherds decorate the horns of the goat with flowers; weave bark reins and two of them take the goat, holding on to the reins. If the goat is big and strong, then a shepherd rides it. At the end, one shepherd bites the goat's tail. The stronger the shepherd bites, the louder the goat bleats. According to the loudness of the goat's bleat the shepherds judge how soon it will snow. And they lead the goat three times round the birch" (Elisonas 1930, 121).
2. "You take a white sheep round the birch and lift it up a bit, because you can not take it into the tree. That means it will snow. Shepherds are tired of pasturing. Three of us take the sheep to a white birch. First we lead it once or twice around the tree and then lift it up to make the sheep bleat. When we lift it we say - 'Cry winter, winter!' (?-J.V.) It was not important what direction we drove the sheep in" (EAA, Čičelienė, 1989).
3. "In order for the winter to come sooner we lifted the goats to the very top of the birch, not one, but two or three, or even four of them (with the help of a rope)" (EAA, Misiūnas 1994).
4. "A he-goat or a nanny-goat was taken round the birch three times. It was set down three times. Some of the shepherds wanted to ride the goat, but they were not allowed to. The goat was led by its lead

- while the others kept saying: 'Run, nanny-goat, to the birch...'" (EAA, Jasiavičienė - Martinkaitė 1994).
5. "A shepherd sits in the birch and preaches a sermon like this: 'We are fed up with pasturing; it is cold, let it snow soon, that would mean the end of our difficulties.' They take an obstinate goat round the birch" (EAA, Kalvaitienė 1994).
 6. "Waiting for the snow to fall, the shepherds used to take the goat round the birch and sing. They squeezed the goat's tail expecting it to bleat" (EAA, Šmailys 1994).
 7. "They [shepherds] drove the goat by words:
Green birch, take this goat from me
For I could lay about on a warm heater
And not pasture any more.
(The shepherds sang hoping for the snow to fall)" (EAA, Rastenytė 1993).

All these GC acts have similarities with the goat offering described in historical texts (see Table 1).

TABLE 1.

Goat ceremony (according to ethnographical sources of the 20 th century)	Goat offering (according to historical sources of the 16-17 th centuries).
<i>Taking a goat three times round a birch</i>	A priest walks three times around the sacrificial animal before killing it (Strykowski 1582 in BRMŠ II 350; Guagnini in BRMŠ II 493). The goat is lifted and they go around the goat as the priest invokes the gods (Sūduviai booklet 16 th century in BRMŠ II 147-148). The animals that were intended to be burned were taken around the holy oak three times (Praetorius in BRMŠ III 246).
<i>Lifting a goat up</i>	The goat is lifted up and the participants go around the goat while the priest invokes the gods (Sūduviai booklet 16 th century in BRMŠ II 147-148). The participants in the offering lift the goat up and keep it aloft while the hymn is heard. (Malecki 1551 in BRMŠ II 208).
<i>Beating a goat</i>	The goat is killed (various sources).
<i>Preaching a sermon in the tree</i>	The Prussian priest preaches a sermon while sitting on a high throne and his head nearly reaches the ceiling of the house (Grunau 1529 in BRMŠ II 110).

With this comparison we can discern a kind of shepherds' game, which emerged from the autumn goat offering ceremony, and which has been widely described in historical texts. The words "Green birch / Take this goat ..." echo the invocations of the goat offering ceremony.

Historical sources mention goat offerings and worship as one of the most peculiar features of the Baltic religion. Let us now try to find a mythological – cosmological motivation for "the goat ceremony". There is a link between the 20th century "goat ceremony" and the goat offering ritual mentioned in the historical sources which gives us grounds to believe the following: that very valuable additional information, not recorded explicitly in the historical sources, could be hidden in the folklore and customs of the 20th century. That is why we will make use of recent ethnographical and folklore sources in trying to reconstruct the cosmological – mythological basis of the goat offering.

The place of the ritual

According to historical sources of the 15th – 17th centuries the goat offering often took place in different buildings (in a barn, in a cottage). It is assumed that the place of the offering was relocated inside because of prohibitions on the part of the Christian authorities, for by this time Christianity was spreading and gaining ground in the region. In pre-Christian times this ritual was performed in the open space of a sanctuary. Indeed, there is reliable evidence that the “goat ceremony” was held around a birch tree and hence that it was an open-air ritual. Other ethnographical and folklore sources lend further support for the fact that the goat was offered in the open air. For instance, from the song-prayers, recorded at the end of the 19th century, we can learn that the goat was being offered near the water (river) on a hill, where the fire was burning day and night:

<p>Grow, grow, grow black bearded goat! Our god waits for you! There's a hill near the river, Where the fire like the star Burns day and night, Where <i>Ruginis</i> and <i>Žvaginis</i> Strangle goats for god.</p>	<p>In August and September We will take you, black bearded one, On that hill, Where <i>Ruginis</i> and <i>Žvaginis</i> Will strangle you For the glory of our gods. (Niemi 1996, 245).</p>
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The content of these song-prayers coincides with the spatial arrangement of the traditional Baltic sanctuary, reconstructed by the researchers of the Baltic religion: A **hill** is chosen near the **water** (river, lake or sea); an eternal **fire** is kept burning which the priests watch over. By the way, in earlier descriptions of the GC we can also find evidence that a fire was made near the birch (Dundulienė 1991, 259). Furthermore, there is no doubt that the reconstructed image of the sanctuary can be supplemented with the **sacral tree** (the birch in GC). Latvian ethnographic materials and materials from our expeditions permit us to insert a **sacral stone** into this scheme as well. The Latvian ethnographic materials convey information concerning the fact that a white goat was taken not only around a tree but also around a stone (ME II 211). In 2001, the author of this article had the good fortune to record a story about the stone *Šventakmenis* ‘sacred stone’, which is found in the village of *Kraujaliai*, Molėtai region, Lithuania (Fig. 1). It is said that once upon a time the sacral stone “**devoured a ram, a shepherd and a birch**”. Here the motives of the GC (shepherd, birch) coincide with the rituals associated with the goat offering (stone devouring sacrifices). A link between this stone and the offering can be surmised from the name of the village *Kraujaliai* (Lith. *kraujas* ‘blood’). Historical sources mention priests, *Kraujuttei*, who predicted the future from the flow, colour and taste of the blood of animal sacrifices.

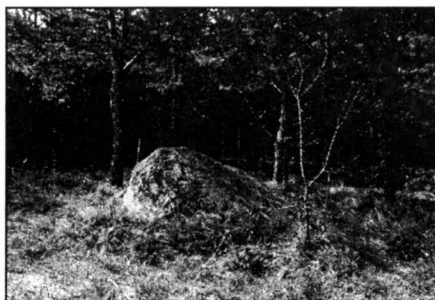


FIGURE 1. The sacred stone in Kraujaliai village, Molėtai region, Lithuania.

The circumstances of the goat offering ceremony permit us to discern the following components of the sacrificial site: **hill + water + sacral tree + sacral stone + fire**. All of them coincide with the archaic cosmological world model reconstructed by ethnographers. The structure of the model consists of a cosmic hill, surrounded by water; with a tree (trees) growing on it and nearby there is a stone and a fire burning.

The timing of the ritual

Historical sources usually ascribe descriptions of the goat offering to the harvest cycle and treat it as a way of expressing gratitude to the gods. For example, J. Malecki (1551) points out that members of the Prussian tribe of Sudovia offer a goat after the reaping (BRMŠ II 208); M. Strykowski (1582) writes that the goat is offered “at the end of October when all the grain crops are reaped and taken to the barn” (BRMŠ II 548). The reaping of grain is mentioned in the above-mentioned song-prayers, which reveal that the goat offering was performed “**after August and September**” or “**after September before the beginning of winter**”. A. J. Greimas discerns links between the rejoicing associated with reaping period, the goat offering ritual and the holiday of **Dagotuvės** (the holiday of Fall growth), which coincides with St. Michael’s day on September 29th (Greimas 1990, 489-492). This day was considered to be the last day of reaping and the day of the goat-offering in the Latvian traditions, as well (Lideks 1991, 212). According to Latvians, on September 29th St. Michael rides in on a white horse, asking if everything has been taken from the field and placed under the roof. If he sees that all the work is finished, then he takes **a white goat three times round a big stone** and soon it starts snowing (Lideks 1991, 206).

GC performed by shepherds is related to the end of pasturing season – **the end of October and All Saints Day**. Historical sources mention a significant fact concerning the goat offering: that it was performed in honour of “all gods” (i.e. the entire pantheon) (Beresnevičius 2004, 186-187). The performance of GC around All Saints Day (XI-01) also points to the semantic context of all gods: All Gods – All Saints. Hence, in both cases the goat offering ceremony emerges as part of the reaping ritual.

Shepherds performed the goat offering ritual expecting snow to fall, which would mean the end of the pasturing season. Usually St. Martin’s day (XI-10) was considered to be end of the shepherds’ work. So, in this case, the period of the goat offering festival stretches out from September 29th to November 10th. According to J. Basanavičius, this period in particular was called the *vėlių laikas* ‘soul’s time’ (Dundulienė 1991, 241), whereas Latvians referred to this period as *Dieva dienas* ‘God’s days’. Based on the content of ethnographic materials we can conclude that the length of this period was not everywhere the same. Usually it lasted for four weeks, including the month of October. That is why October used to be called Soul’s month in Latvia and Lithuania. We can assume that previously a goat could be offered not only at the beginning of the festive period, but also at the end of it. Moreover, we have solid evidence that at the border of Lithuania and Byelorussia a goat offering ritual was performed, at night, on the eve of All Saints Day (Byelorussians called it *Dziady*) (BM 44). In addition, we should point out that dressing as a goat during the New Year or Shrove Tuesday carnivals was peculiar to the Balts and Slavs.

Mythological motivation of the ritual

The nature of the material contained in these historical and ethnographic descriptions make it evident that a mythological-cosmological motivation should be sought for the goat offering ritual. Such a motivation had to be expressed by myths that were transmitted through oral tradition. Unfortunately, we do not have ritual texts with a direct link to GC and the goat offering. Only a few “sermons” preached by a shepherd from the tree during GC could be mentioned. The birch is asked to take the goat (see

above ethnographic description 7), while the goat is urged to ask God for snow. The goat is threatened with a beating if he does not ask for snow and if it does not snow (Buračas 1993, 115, 117). We can detect traces of GC in folklore, for example, in the children's song "Go, goat, to bring water" (GGW). Here is one variant of this song:

1. – Go, goat, to bring water, Little goat, bring water. – I'm afraid of the wolf. – Don't be afraid of the wolf:	2. Stamp you feet, Rattle your horns, Scoop water with one foot, Defend yourself with the other. When I was passing the manor,	3. I met the bailiff. The bailiff said hello to me, But I was silent. Then the bailiff hit my leg ¹ , all my bones fell apart.
4. I put my bones into a sack. Brought them home and planted them in the garden. There two lime trees grew, And the third was apple tree.	5. Then I cut the apple tree and made myself a pipe ² . And I went to entertain the youth. I played joyful songs for the maidens, I played sad songs for the wives.	(LLD I Nr.417, P.228-229).

In the opinion of folklorists, this and similar children's songs could be explained as being remnants from the repertoire of adults and earlier could have had links to ritual calendric poetry (Jokimaitienė 1980, 24; Czernik 1958, 48-50).

It is relatively easy to recognize that the plot of the song has ideas in common with the storyline of the GC:

1. The goat is made to go. It does not want to and balks.
2. The goat is asked to bring water (compare the reference to 'water' with the 'snow' requested by the shepherds).
3. The goat is being beaten in both cases.
4. In both cases the image of a tree is prominent.

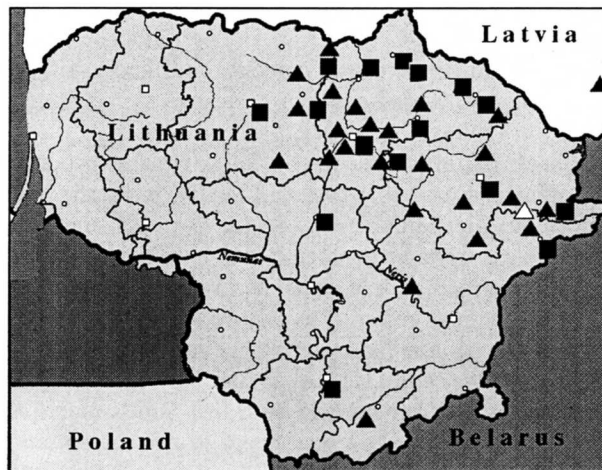


FIGURE 2. The distribution of the song "Go, goat, to bring water" (GBW) and "goat ceremony" (GC).
■ – GBW ▲ – GC

Geographic distribution of the ritual

We have analysed the cartographic distribution of the above-mentioned song (GGW) and the "goat ceremony" (GC) (Fig. 2). Comparing the plots of the GC and the song made it possible to collate these ethno- cultural phenomena and reach the following

¹ There are variants where the bailiff hits the goat's leg with a bat (LLD I 424), while in some variants of the song the goat hits the bailiff's leg.

² Variants: *kanklius* (*kanklės* –the stringed instrument of the ancient Lithuanians) (LLD I 424), rattles, violin, accordion, etc.

conclusions: 1) It is possible that shepherds sang GGW during the goat ceremony. 2) It is possible to trace the elements of the goat offering in the song GGW.

The main characters in the song are the goat, the bailiff and the wolf. The wolf is mentioned only as the object of fear and it does not participate in the events of the plot. The motif of water is of great importance. It emerges as the main theme of the plot. The words of the song ask the goat to bring water. So what is that goat which brings water? In Lithuanian mythology the image of the goat is related with rain, lightning, thunder and the Thunderer – Perkūnas. For instance, let us take a riddle: “A goat goes bleating and scratching the sky, leaning on one leg, sweeping the ground with its beard. (Perkūnas)” (LTR 2198/105/)³. Nearly the same words are found in certain GGW songs: “5. A goat goes, \ Scratching the sky with a horn [lightning – J.V], \ Sweeping the ground with his beard [rain – J.V]...” (LLD I Nr 419, P.230). By the way, Lithuanians call the bird *Capella gallinago* **Perkūno oželis** ‘thunder’s goat’ and they believe that his voice, which reminds one of the bleating of a goat, is a call for rain. We can find evidence in Lithuanian mythology that Perkūnas drives a cart in the sky and a goat or triple-nine grey goats pull the cart (LTR 763/4/, 2281/13/ Laurinkienė 1996, 103; Ivanov, Toporov 1974, 83). The Scandinavian Thor drives a similar cart. All these cases show that we are dealing with a goat, which is kept in Perkūnas’ hand. Images of a goat in the sky occur, too, in fairy tales.

Though the link between the goat and **Perkūnas** in the Lithuanian tradition is well established (Laurinkienė 1996, 103)⁴, the goat can also assert itself as the incarnation of **Velenas** (the Devil), the opponent of Perkūnas. Velenas turns into a goat and teases Perkūnas. That is why Perkūnas attacks it (Laurinkienė 1996, 153). These two opposing symbols of the goat appear to come together in the main Indo European myth about **the fight between Perkūnas and his opponent near the cosmic tree**. Perkūnas kills his opponent under the guise of an armed warrior. And as a consequence of the victory prolific rain lashes down. That is why this myth should be considered in the context of both the “goat ceremony” and the goat offering ritual. Ivanov and Toporov, who reconstructed the myth, point out that information encountered in “degenerated rituals” which later are transformed into games, is very significant for verifying separate details of the myth. The authors mention Slavic rituals carried out with a goat, which were performed in order to increase fertility: driving the goat and later killing it (Ivanov, Toporov 1974, 115). In neighbouring Byelorussia there was a Christmas performance of “killing” a goat. In it a masked performer playing the role of the **old man-gunner** “killed” the **goat** but later the goat came back to life, reborn. (BM 212, Urbanavičienė 2000, 222-223).

Let us leave the retrieval of the further mythological and religious implications of the goat image for a separate study. Here let it suffice that on the basis of this analysis we can conclude that in Lithuanian mythology the goat was closely related to the main myth depicting the fight between **Perkūnas** and **Velenas**. It acted as a kind of an intermediary between the sky and the spheres of the Earth, connecting humans to the gods, at the same time), and, as such, it was able to call down rain, Perkūnas and guarantee fertility. From this point of view, both the “goat ceremony” and the goat

³ For more riddles see Laurinkienė 1996, 104.

⁴ “If Perkūnas’ goat is bleating, it means that the weather will change and it will rain. It is a small bird which lives near the water or a peat bog. I am sure if the Perkūnas’ goat is bleating, it means there will be rain” (EAA, Savickienė 1992).

offering might be interpreted as purposeful ritual repetition of the main myth (or a part of it). In summary, from this perspective, the re-enactment was conducted in order to bring about a renewal of the associated mythical events, events that had as a central component the appearance of the goat in the sky.

Possible astronomical coding of the ritual

The above-mentioned ritual and folklore deal with a goat that was sent for water and snow. In the cosmological context the goat is associated with the mythologized image of the constellation of Capricorn. Here we must bear in mind the tradition common to various nations relating the stars of this constellation to a goat, storms and water. Latin names for the constellation reveal this association, e.g. **Aequaris Hircus** “the Sea Goat”, **Imbrifer** “the Rain-bringing” (Allen 1963, 135-138). As we have reconstructed it, the Lithuanian goat, standing symbolically for “water bringer”, shows similarities to the Greek deity Pan. Both of them are goats; both are related to shepherds; both play musical instruments (our personage makes himself a musical instrument from the bones of his broken leg), and bring precipitation. In ancient times the constellation of **Capricorn** was supposed to be the supernatural incarnation of Pan. They say that Zeus sent Pan to the sky and appointed him to be the portent of storms and the ruler of waters. And for this reason he sends showers to the Earth.

Three basic elements (namely, a **goat**, an **armed man**, and **water**) of the reconstructed Lithuanian story about the goat “water bringer” coincide with the symbolism of the three neighbouring constellations of the Zodiac – Aquarius, Capricorn and Sagittarius. We understand that searching for the astronomical coding of the “goat ceremony” can lead us to the level of “pathological ethno-astronomy”, that is, conclusions based on only on free associations. This is why it is necessary to support our theoretical speculations with facts: the representation of the Goat constellation as it appears in the Baltic tradition. Although the Lithuanian ethno-astronomical materials recorded in the 19th and 20th centuries lack reliable information about the Zodiac constellations, still we can attempt to identify the name of the Goat constellation from among the folk names given to stars.⁵ Knowledge about the Goat constellation can be traced in Byelorussian traditions, which are kindred to those of the Baltic culture.⁶ Furthermore, we should point out the Lithuanian name for the southeast wind, which was called **ožinis** ‘the goat wind’. Sagittarius rises exactly in the southeast direction. And the tradition of relating names of the winds to the rising or setting of groups of stars is a common practice among many nations of the world.

However, the sign system on the wooden scoop from Gardin, dating back to the 15th c. and investigated by this author, provides the most important evidence, namely, that the Goat constellation was known and identified with the constellation of Capricorn. Among the twelve signs depicted, one next to the other on the scoop, there are images of a **Goat and Spearman**⁷ (see Fig.3). It is alleged that these signs correspond to the constellations of Capricorn and Sagittarius, respectively (Vaiškūnas 2000, 320-321).

⁵ *Ožiaragio žvaigždynas* ‘constellation of the Goat’ (EAA, Maskeliūnas, 1984), *Perkūno ožys* ‘Perkūnas’ Goat’ (EAA, Mintauskas, 1992).

⁶ “*Коза*, народная назва нейкара сузор’я” (The goat is the name for some constellation) (Vitebsk region) (BM212).

⁷ Namely, these two signs are easily recognised as **Gemini** (two fighting warriors) and they have become the decoding key of this system of signs, making it possible to identify all 12 signs.

The zodiac story of the goat and the spearman coincides with the mythological story about the armed man who hits the goat's leg. A galloping **horse** is depicted opposite the goat instead of Aquarius.

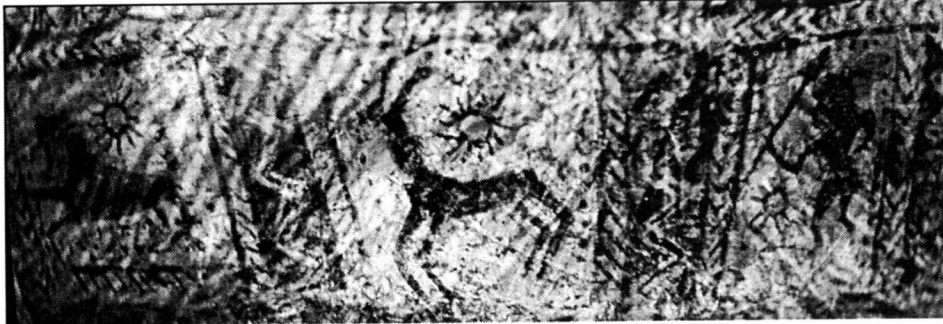


FIGURE 3. Signs of the Zodiac on the wooden scoop from Gardin (from left to right): Horse (Aquarius), Goat (Capricornus), Spearman (Sagittarius) (Vaiškūnas 2000, 324).

It should be mentioned that some variants of the song GGW include a motif about an unusual mare, which is stolen by two thieves. Let us bearing in mind the following facts, specifically: 1) that some descriptions of the “goat ceremony” mention a white horse was taken instead of the goat; 2) that in Latvian folklore there is evidence St. Michael himself comes riding on a white horse and takes a white goat to the birch; and finally 3) that some variants of GGW mention Matthew (St. Matthew – 21-IX) or Michael (St. Michael – 29-IX) next to the unusual mare. Thus it might be supposed that the mythical story about the cosmic goat could be augmented by the image of a cosmic horse⁸. Let us leave this mythical story for the moment and go back to our discussion of the astronomical aspects of the GC.

Leading the goat around and lifting it are emphasized during the ritual. In the course of the ritual performance the goat is lifted up or even taken into the tree. It is possible to discern not only a symbolic presentation of the goat to the gods, but also the ritualistic repetition of the mythical story about transferring the goat from earth to heaven. On the other hand, the offering itself might be considered a symbolic transference of the offered object to heaven. Various nations of the world have myths where a hero or his attribute is transferred to heaven and then very often related to a certain star group. In this case the myth usually contains references to an astronomical-calendar code that allows one to relate a certain star group to the propitious timing of a certain traditional ritual or some other activity. As some respondents point out, the goat was taken round the tree “in the direction of the movement of the Sun”. Here we can detect a hint about the Zodiac circle where the Goat zodiac constellation travels. Going round and rising at the same time are peculiar to the movement of celestial bodies. In this case the goat ritual might be understood not only as offering of an animal to god and asking for water (precipitation), but also as a re-enactment of the Goat constellation’s movement: trying to make it culminate as soon as possible and set in the imaginary cosmic waters that stretch into the horizon. Moreover, it is quite possible that the goat ritual might have been linked to the evening culmination of the Goat constellation, as well as the heliacal setting of this constellation. In addition, historical sources demonstrate that in Lithuanian religious belief there existed the custom of performing certain rituals when

⁸ For more information about the **Horse** constellation, see Vaiškūnas 2000, 322.

the Sun was entering a certain sign of the Zodiac (Vaiškūnas 2000, 319). Perhaps we could identify remnants of the goat offering rituals in the Christmas performances where “the goat is killed” and “rises again”. But this is a question that must be left for a separate study. For now let us focus on the autumn GC.

During the period between the end of September and the beginning of November, when the GC were performed, the constellations of Aquarius, Capricorn and Sagittarius rise above the horizon. Therefore, it is possible that there was a celestial component in the timing of the autumn goat offerings: that the offerings might have been intended to coincide with the evening culmination of Capricorn. It is a suitable time to observe such a constellation, one that does not have bright stars. In addition, we might note that at about the middle of 6th century the evening culmination of Capricorn coincided with the autumn equinox (21-IX); its heliacal setting coincided with the winter solstice (19-XII). And the time of heliacal rise was close to the spring equinox (19-III). Later, the evening culmination time of the constellation gradually moved through the days of October. In 16th and 17th centuries the culmination of the evening goat constellation would have been observed at the end of October and on 1st of November⁹. Precisely this autumn goat offering time was mentioned in the M. Strykowski chronicles of 1582. In the opinion of historians of religion, in the 17th century the spread of Christianity brought about the gradual disappearance of pagan communal festivals, which later became family ethnographic customs (Beresnevičius 2004, 35-36). Still the ancient autumn goat offering ritual, which became a playful custom among shepherds, survived until the very middle of 20th century.

In summary, the material we have discussed about “the autumn goat ceremony” allows us to discern the degraded goat offering ritual, and at the same time it provides us with a basis for formulating a hypothesis about the possible relation between this ritual and the constellation of Capricorn as well as the observation of the neighbouring constellations of Sagittarius and Aquarius. Clearly the Lithuanian ethnographic materials alone are not sufficient to prove the validity of this hypothesis. So in the future additional comparative research into this field will be required.

Conclusions

1. The “goat ceremony” performed by the Lithuanian shepherds up to the middle of 20th century might have originated from the pagan goat offering custom.
2. The images of the “goat ceremony”: **hill + water + sacral tree + sacral stone + fire** coincide with the structure of the pagan sanctuary and the archaic cosmological model, as well.
3. Analysis of the “goat ceremony” and goat offering rituals permits us to assert that the myth about the goat might be related to the rising of the constellation of Capricorn above the horizon in the evening.. The time of the goat offering ritual might have been defined according to the evening culmination of Capricorn constellation when it is most visible.

⁹ The evening culmination time of Capricorn was not clearly defined and could have been located according to the evening rising of the Pleiades, which could be easily noticed above the north-east and east horizon. We should keep in mind that the end of twilight and the position of Capricorn might have been chosen when the Pleiades had become visible in the sky.

4. The characters of the reconstructed myth about the goat, namely, **a goat and an armed man**, might have been coded with the neighbouring constellations of Capricorn and Sagittarius at the astronomical level. There are some data that a mythical horse might have been added to the same story and that it corresponded with the image of Aquarius constellation.
5. Both the “goat ceremony” and the goat offering ritual could serve to repeat a subject of the main myth (or a part of it), by trying to go over the same mythical events, as a result of which, the goat upraised in the sky was intended to relate to the constellation of Capricorn.

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List of abbreviations and published and unpublished sources

LTR: Archives of manuscripts of Lithuanian Folklore in the Institute of Literature and Folklore at the Lithuanian Academy of Sciences, Vilnius.

EAA: Personal ethnoastronomical archives of J.Vaiškūnas:

Čičelienė – Kavaliukaitė, Olga, Stanislovo, born 1915, Naujasis Daugėliškis, Ignalina region. Written down by J.Vaiškūnas 1989.

Jasiavičienė – Martinkaitė, Cicilija, Jurgio, born 1912, Karašilis village, Pakruojis region. Written down by R.Jurgaitis 1994.

Kalvaitienė, Elen, Vinco, born 1923, Telišioniai village, Pakruojas region. Written down by R.Petrauskas 1994.

Maskeliūnas, Liudas born 1907, Lapšius village, Seirijai circuit, Lazdijai region. Written down by A.Vaičekauskas 1984.

Mintauskas, Bronius born 1911, Linkaučiai village, Kražiai circuit, Kelmė region. Written down by J.Vaiškūnas 1992.

Misiūnas, Petras, Antano, born 1909, Plaštakos stading, Žemaitkiemis circuit, Ukmergė region. Written down by V.Vaitkevičius 1994.

Rastenytė, Adelė, Liudviko, born. 1903, Kirdeikiai, Utena region. Written down by J.Vaiškūnas 1993.

Savickienė, Julė, born 1914, Kolegijos - 5, Kražiai. Written down by J.Vaiškūnas 1992-07-17.

Šmailis, Stasys born. 1910, Pakruojis village, Pakruojis region. Written down by R.Jurgaitis 1994.

BM: *Беларуская міфалогія*, 2004, Мінск.

BRMŠ: *Baltų religijos ir mitologijos šaltiniai*, 2001, T.2, 2003, T.3, Vilnius.

LLD I: *Lietuvių liaudies dainos. Vaikų dainos*, 1980, T. 1, Vilnius.

ME II: *Mitologijos enciklopedija*, 1999 T.2, Vilnius.

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