

THE GODDESS AND THE COPPER SNAKE: METALLURGY, STAR-LORE AND RITUAL IN THE ROCK ART OF THE SOUTHERN LEVANT

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ABSTRACT

Pastoralism and metallurgy emerged simultaneously in the arid southern Levant, with the first attested records dated to the Late Neolithic. The two economies reached their maturity during the Chalcolithic and the Early Bronze Age. The bulk of the rock engravings of the Negev Desert and the neighboring areas are dated precisely to this period. Their symbolism bears witness to the compatible values of smiths and nomads. These beliefs are also well-reflected in nomadic star-lore, which is apparently the oral version of the stories told by a number of petroglyphs. The literature describing the relations between pastoral nomads and itinerant coppersmiths, from ancient to modern times, emphasizes the special status of the latter, which is expressed in their role as marginalized ritual specialists. Even that the values professed by coppersmiths left a deep mark on the mythology of the nomad, the influences were reciprocal, and the descendants of the Bronze Age smelters would become the champions of nomadic virtues during the Iron Age.

Keywords: after-life beliefs, Ashera, biblical, Kenites, masseboth, metallurgy, Negev, nomadic pastoralism, petroglyphs, Recabites, ritual, Solubba, star-lore, tumuli.

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INTRODUCTION

The archaeological record of the period when pastoralism emerged in the Negev Desert and rock art – which is an integral part of the record – are, to the author's knowledge, not sufficiently correlated in the literature that deals with the period. Moreover, the influence of metallurgy, another parallel development, is utterly ignored in the interpretation of rock art. In this paper, the impact of metallurgy on the representations of the nomads is sought for in the symbols engraved by the latter. Nomadic star-lore, as another expression of symbolic thought, is presented as an integral part of the picture. The archaeological record, which reflects the beliefs of the period discussed can be interpreted correctly only when all the components of the nomad-metallurgist mentality are analyzed and reported to each other. The author argues for an approach to the interpretation of rock art and the archaeological record from the perspective of the apparent affinity between the symbolism of desert star-lore and metallurgical concepts. The aim of the paper is to offer a coherent image of the spiritual landscape of the ancient Negev, which was apparently the result of the cultic cooperation between smiths and nomads. In order to achieve this, the paper describes the shift in mentality from agricultural to pastoral concepts (Shepard 1998), the compatibility of the latter with metallurgist values (Amzallag 2008, 2009), and the reflection of these beliefs in the archaeological data of the period (Avner 2001; Rosen 2007). Solid archaeological evidence is compared to less-palpable oral traditions that survived in nomadic star-lore (Bailey 1974). Moreover, a ritual frame (Lewis-Williams and Dowson 1988; Garfinkel and Waller 2008; Kent 2010; Mailland 2015a) into which the aforementioned concepts were introduced is also sketched and proposed.

To illustrate the hypothesis proposed in the paper, an iconic symbol that surfaces in a number of rock engravings from different locations in the area is singled out and interpreted in various contexts, from different perspectives. The symbiotic partnership between tent-dwellers and itinerant coppersmiths is followed through the ages and taken beyond the limited information that we possess, which is restricted to the biblical account. Apparently, the Kenite coppersmiths and their descendants were associated with most of the nomadic groups of the southern Levant and the Arabian Peninsula (Wolff 1835) and a vestige of such a partnership is documented to our days (Glubb 1943; McNutt 1994; Betts 2003, 2004).

DISCUSSION

1. The Parallel Emergence of Pastoralism, Metallurgy and Rock Art

1.1. Pastoralism

The earliest evidence of animal herding in the Negev Desert does not necessarily coincide with the date of the domestication of goats and sheep, but it would take another thousand years, and by 5,500 BCE pastoralism seems to be an already well-established economy. This date is based on the analysis of dung layers in cave-shelters (Eddy and Wendorf 2002; Levy 1983) that are very similar to those still in use by contemporary Bedouin. In other parts of the world there is earlier evidence, precisely from the period of domestication. The introduction of caprines to Africa occurred in the 6th millennium BCE (Close 2002) and because the generally held opinion is that small domestic livestock originated in southwestern Asia, it is only a logical conclusion that these domesticates were present in the area of the only land bridge between the two continents at an already earlier stage (Makarewicz *et al.* 2016). Nomadic lifestyle and multi-resource pastoralism (Haiman 2002; Rosen 2003) are already well-documented during the Chalcolithic and the Early Bronze Age. In these periods the fully nomadic lifestyle alternated with semi-nomadic pastoralism according to the intensity of rainfall and the availability of forage (Rosen 2003). Pastoralism proved itself to be one of the most durable economies ever known to mankind, and it persisted in an almost unaltered form to the present.

1.2. Metallurgy

Metallurgy had a parallel development with that of nomadic animal husbandry. The first tentative experiments occurred long before the “official” start of the Copper Age in many areas outside the southern Levant, but the wish to see metallurgy as a linear development with its origins in the Middle East led some scholars to adopt a diffusionist approach to the subject. Others, by taking into consideration the apparently autonomous development of copper metallurgy in isolated regions, proposed a localizationist solution. However, there is a difference between crucible smelting, which is an early technology with the source of heat around the reactor, and furnace smelting, a more developed process with the source of heat within the reactor itself. The smelting of copper is attested in the southern Levant from the 5th millennium BCE. The peculiarity of this area is that copper does not occur in the form of lumps and thus, instead of the more incipient crucible smelting, furnaces were used starting with the earliest stages of copper smelting (Rothenberg 1992; Amzallag 2009).

1.3. Rock Art

The earliest rock engravings in the Southern Levant are dated precisely to this period (Anati 1985), when pastoralism and metallurgy become established. However, the bulk of the petroglyph corpus is dated to later periods (Chalcolithic and Early Bronze Age) (*ibid.*), when the two economies reached their maturity. This period witnessed unprecedented population densities in the Negev, but this was to change starting with the Middle Bronze Age II when the Negev and Sinai would become depopulated for almost 900 years, due to harsh climatic conditions. It is only at the start of the Iron Age when human habitation and rock art – already complemented by rock inscriptions – are recorded again. The spatial distribution of the Chalcolithic and Bronze Age rock art seems to be related to the copper industry and it is present mainly along the corridor running between the three major centers where copper deposits occur: Punon, Timna and Serabit el Khadim. Other concentrations are found along the dry riverbeds and mountain passes used by pastoralist populations in their migrations between the Edom Plateau and the Delta, where there was always available forage for the flocks, even in lean periods.

2. Pastoralist Values and Beliefs

2.1. The Shift in Values: Sky vs. Earth; Cyclic Renewal vs. Fertility

The new economy attracts a shift in mentality, and values that are very different from those of agriculturalist populations start being professed by desert nomads. The new concept of the world becomes more sky-oriented, as opposed to the earth-dominated perception of agriculturalists. While fertility plays a central role with the latter, in the desert, where there is no fertility to talk about, the cyclic renewal of the seasons that determine not only the availability of forage, but also the movements of the animal herders and their livestock, gains importance. The location of the sacred is also shifted, and it moves skywards: the generous mother-goddess of the peasant, identified with the earth and fertility, is gradually replaced by the father figure of a sky-god who is keeping an eye on his subjects and regulates the cyclic renewal of rains and forage – as a gift or punishment – from his abode, which is usually located on a holy mountain (Shepard 1998; Steiner 2010). This shift in symbolism becomes also reflected in social organization, with the matriarchal order of the agriculturalist being gradually replaced with the patriarchal values that are so typical to pastoralist societies. The world itself

becomes vertically stratified, with a lower world of man and a higher otherworld and after-world, where the shepherd-god and the ancestors are at home.

2.2. Ancestor Worship, Lineage Families and the Preoccupation with After-life

However, the idea of the mother-goddess of the agriculturalists is not forgotten and the fertility that she is symbolizing, but which is missing in the desert, is projected on the after-world, which is perceived as qualitatively superior to ours. The concept of Paradise as a reward, the yearning for a place at the side of God, the green color of Islam, and the persistence of a female deity at the left-hand side of the omnipotent male god may have their source in this symbolic reshuffling of the roles played by gender. Monotheism is another general inclination that characterizes the nomad, and its emergence in the southern Levant is paralleled by similar developments in Central Asia (Shepard 1998; Steiner 2010; Mailland 2015a). Ancestor worship and lineage families, both related to the vertical hierarchy of the nomad's world, are also characteristic to the period, as evidenced by archaeological remains like *tumuli*, *masseboth* and alignments on one hand, and rock art symbolism on the other. What must be stressed here is that the notion of an after-world is related to renewal and transcendence and that these concepts reflect the supreme concerns of desert nomads.

2.3. Common Rock Art Motifs and Their Temporal and Spatial Continuity

A common representation of the female principle related to after-life is an *ankh*-like figure with outstretched arms. The left arm (from the observer's point of view) is represented as ending in a hand with exaggerated fingers, while the right arm is drawn as a snake. The rock engraving is known to the author from three different locations in the Negev (Nahal Zihor and Nahal Zin, and an additional, slightly different, but obviously related drawing on Har Karkom). The same motif is known from southern Transjordan and northern Hejaz.



However, the dominant motif in the rock art corpus of the Negev, which is featured in not less than 63% of the engravings (Anati 1985), is that of the ibex. The ibex drawings can be interpreted in at least six different ways (depending on the context in which they appear), which are complementary to each other. In the light of what was said up to this point, the ibex may be perceived as (i) the mediator between the two worlds: at daytime, the ibex descends to the lower world of man, while at nightfall it climbs to high and inaccessible places, where God is at home. As professional shamanism is also a phenomenon that characterizes the period discussed (Gilead 2002), and because ritual specialists are known as mediators, the ibex symbol may be (ii) a representation of the form assumed by the latter. The crescent-shaped horns of the wild goat declare its (iii) affinity with the moon, which is (iv) a universal symbol of renewal and transformation, but also (v) the symbolic representation of the Semitic moon-god *Sin* (Bastoni-Brioschi 1998; Wachtel 2014). With time, it would also become (vi) the symbol of coppersmiths and their trade, as they would gradually take over the role fulfilled by the shamans. Winged, bird-like figures, very common in the petroglyph corpus, are also related to this mediating role and may be seen as the forerunners of the later concept of angels. The snake is another very frequently depicted motif related to renewal, mediation and transcendence.

What characterizes the motifs that dominate in rock engravings is their spatial and temporal continuity. They are located at hundreds of miles from each other and were engraved in periods separated by thousands of years. From Chalcolithic to Bedouin times, the same motifs resurface in different corners of the southern Levant, a territory that was defined by the same economy and climate.

2.4. Desert Star-lore, the Essence of Pastoralist Beliefs

The seasonal return or disappearance of particular stars, asterisms, and constellations was either anticipated or dreaded by the desert nomad, depending on the blessings or curses of which they were harbingers. The stars became familiar figures, personalized as heroes or villains, and their stories were engraved in rock or handed down through generations, as poems and proverbs that were also related to the theme of cyclic renewal. Bedouin star-lore in the Sinai and Negev (Bailey 1974) cannot be very different from that of the nomads who preceded them in the region, given the longevity and stability of the pastoral way of life and the example of the temporal continuity of the motifs depicted in rock art. Petroglyphs that are presumed to depict asterisms and constellations should not be interpreted as sky-maps – which the nomad does not need – but as graphic

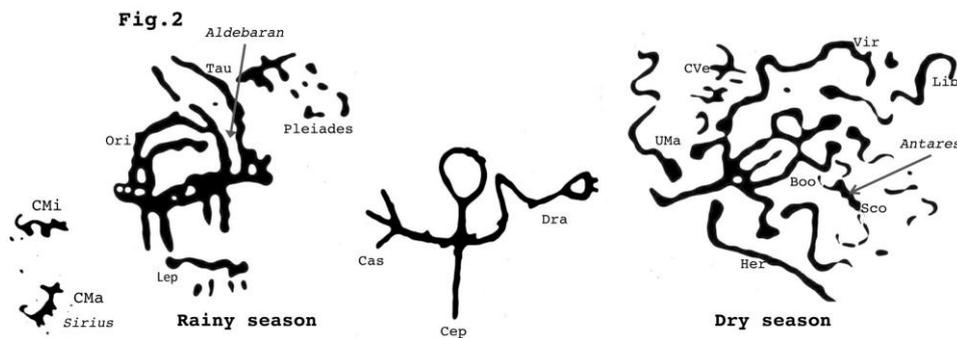
references to well-known stories and concepts told and illustrated by the stars. This is an important function in a culture based on memory and oral transmission.

Beside orientation in space – which is undoubtedly important to the nomad travelling in the desert at night – stars are also useful for orientation in time: the beginning of the rainy season, the sprouting of the vegetation on which the survival of the flocks depends, the calving period, and other events that are of crucial importance in a nomad’s life are correlated with the nocturnal or heliacal rising and setting of certain stars.

Only the circumpolar area around the constellation Draco is visible all year long. Draco, not only because of its reliability, but also because of its shape, may be easily imagined as an ibex, with the polar star drawn as a dot inside its horns, or represented as a kid (the Arabic name of the star is *al-Jidy*, which means kid). Later, the image of the ibex would be replaced with that of a pregnant or calving she-camel (Eisenberg-Degen and Rosen 2013), whose story is mentioned in the Qur’an and which is related in another paragraph. Draco – because of its year-long presence in the sky - is also identified in tradition as the seat of God. To the left of Draco (from the viewpoint of the constellations), one can trace out an *ankh*-like figure, with its head on the polar star and its body corresponding to the axis of the constellation Cepheus, which is also situated in the circumpolar area. The figure has two arms: one of them ends in the constellation Cassiopeia (the name of β *Cassiopei*, *Kaph*, means palm in Arabic and Hebrew and it is known as the “lucky hand” to the Bedouin) and is represented with three exaggerated fingers. The second arm is a horned snake that is drawn along the neck and head of the camel, which is Draco. This is the figure that we have already mentioned and identified as the goddess related to renewal, at the left of God.

Between October and March, the arc described by her three fingers encompasses the celestial area where asterisms and stars associated with luck (Capella), rains (Pleiades, Aldebaran and Betelgeuse) and the renewal following them (Hamal) are positioned. The constellations in which these stars are located (Orion, Taurus, Auriga, Aries) are found precisely within that arc of the ecliptic which is associated with the vernal equinox and the period immediately preceding it. The proposed position of the goddess in the sky becomes even more significant when we take into consideration that her outstretched arms encompass precisely the 90° of the ecliptic that is situated between the winter solstice and the spring equinoxes of today. Thus, her role in renewal is emphasized: she seems to be involved in the transition between winter and spring, which is characterized by increasingly longer days.

Aldebaran (*Imjayid* in Arabic) is a bright red star that dominates the winter sky. Its counterpart is another red star, Antares (*Uheymir* in Arabic) that rises in the east at sunset when Aldebaran disappears in the west, and it is a permanent feature in the summer sky. Not incidentally, the snake-like arm of the goddess points precisely to Antares, the red heart of Scorpius. Thus, she attracts attention to the relatedness of the two. Given the complementary character of the two stars, it is very plausible to perceive Antares as the summer aspect of Aldebaran. Its apparent role at the peak of the dry season is to prepare the return of Aldebaran and the rains. The scorpion’s task in summer is carried out by two dogs towards the end of winter (Canis major and minor), which are hunting down Orion to enable the return of the spring. The star Sirius (*Burbarah*, “the barking one” in Arabic) of Canis major may have a central role in the chase. There are many petroglyphs scattered all over the Negev, which seem to depict such a symbolic hunt. The nocturnal rising of Sirius coincides with the setting in of a 40-day period, known as *Al-Arbainiyah* to the Bedouin. This is followed by spring and the plenty that comes with it. The hunt may be understood as a 40-day chase, meant to restore the sun, so important to the growth of vegetation. Semi-nomadic Bedouin, who are practicing part-time, so-called “dry” agriculture, see in the nocturnal rising of Sirius a marker that sets the time for the sowing of winter-wheat (*ibid.*).



In Fig. 2, the dominant constellations of the winter sky (Taurus, Orion) are represented as zoomorphic figures, while the summer constellations (Virgo, Scorpius, Libra) are imagined as snakes and scorpions devouring a bird-like lizard (Bootes). Incidentally, this petroglyph seems to depict that arc of the ecliptic in which the autumn equinox occurs. Thus, it may be a parallel story to that told by the petroglyph to the left of the goddess in the figure. May to October is the “cursed” part of the year, as opposed to the “blessed” period

between November and April, which also corresponds to the gestation period of the ibex. The kids are born together with the vegetation that sprouts as a result of the rains that impregnated the earth during these months. Hence, the pregnancy of the ibex is parallel to that of the earth. The emphasis on cyclic renewal in star-lore is evident and the involvement of the goddess with the outstretched arms, although related to fertility, is very differently defined. As she is apparently also associated with after-life beliefs, the stories related to this concept may be placed between the coordinates of Aldebaran and Antares, especially because the archaeological record of the period - as evidenced by prevalent orientation patterns - seems to reflect a preoccupation with this very subject.

3. Archaeological Support

3.1. Alignments, Tumuli and Sacred Precincts

The funerary traditions of incipient pastoralists are still different from those of evolved animal herders. *Nawamis* are communal burials (Goren 2002), while *tumuli* are individual inhumation sites. In the latter, the body is often buried in a fetal position, and some of the burial mounds are tailed: a stone wall is built as an extension to their eastern side, thus a general east to west orientation - aligned with the path followed by the sun or other celestial bodies - is consciously observed.

Walls are also common structures in the Negev, some of them only a few yards long, while others reach a few miles in length. The majority of these walls are also east to west oriented, with *stelae* (*masseboth*) or shrines on the eastern end and prominent burial mounds (*tumuli*) in the west. The best known is the so-called "K-line", a 2.8 miles long wall between Har Ramon in the east and Har Romem in the west (Haiman 2000). Most of these lines are related to *tumuli* fields and alignments and are dated to the Early Bronze Age I. Given their proximity to burial mounds, and because of their prevalent east to west orientation, it is assumed that they are in a way related to astronomical alignments and to dead cult, to ancestor worship or, to rebirth (Granot 2008, personal communication). The east to west orientation of these lines and of other contemporary archaeological complexes is usually related to the position of the setting sun on the day of the summer solstice (Rosen 2007). However, the author proposes a different approach, based on personal observation. This would explain the prevalent orientation of these alignments in the light of the already mentioned relationship between the stars Aldebaran and Antares. The relatedness of the two stars with the concept of renewal - which is central to both pastoralist and metallurgist beliefs, to rock art, and to the archaeological record, seems to be more than incidental.

There are two archaeological complexes in the Negev that illustrate very well the relationship between funerary traditions, after-life beliefs and the cycle of renewal. One of them is the sacred precinct on Ramat Saharonim in the Ramon Crater (Rosen 2007) and the other is the Zin-Mehia alignment on the Avdat Plateau (Steiner 2010).

The first example is a *tumuli* field, transitional in character, with *tumuli* that resemble *nawamis*, even that they contain individual burials. Their dating to the Neolithic – Chalcolithic transition coincides with the period of emergence and establishment of a pastoral elite. Four courtyard shrines and thirty large burial cairns are embedded in the landscape and are aligned with a prominent black volcanic hill to the west, and also with the setting sun of the summer solstice, with azimuth deviations of 2 to 8 degrees. The *tumuli* are set on parallel ridges and are visible from great distances. The alleged summer solstice alignment may be related to death symbolism and the association of the shrines with the *tumuli* suggests a mortuary cult (Rosen, 2007).

The Zin-Mehia alignment was researched by the author, and it is located 20 miles to the north of the Ramon Crater, on the Avdat Plateau. It belongs to a later period, but it reflects the same concept like the Ramat Saharonim complex: an east to west oriented 2.5 mile long alignment that is situated between a pair of *masseboth* on its eastern end, which are aligned with two prominent hills in the west, on top of which there are large *tumuli*. The impressive burials may be the graves of real or epic ancestors and may also denote territorial claims. A number of rock art sites (with the oldest drawings probably engraved in the Late Neolithic or early Chalcolithic, and the more recent ones only a few decades ago), *bamot*, *masseboth* and shrines are strategically located on the alignment. From behind the *stelae* on the eastern side of the complex, on the day of the summer solstice, the sun is not setting behind the saddle formed by the two prominent hills topped by *tumuli* on the western end, and the azimuth deviation is much larger than that measured on Ramat Saharonim. However, in the first days of June, Antares rises in the east at sunset and sets behind the saddle at dawn. At the end of November Aldebaran describes the same path in the sky. Hence, the Zin-Mehia complex seems to be rather aligned with the trajectory of these two stars than with that of the sun. The orientation reflects the position of the equinoxes on the ecliptic 5,000 years ago, which corresponds with the age of the oldest petroglyphs found here.

The use of the same rock surfaces for engravings for thousands of years points to a continuity of traditions, which are apparently related to ancestor worship and after-life beliefs. A very frequent rock art motif that depicts a couple in praying posture is drawn on three rock surfaces that are only a few yards apart. Judging by the patina covering them, they were etched in the rock at periods separated by thousands of years. Moreover, a very old and elaborate depiction of the couple is engraved on a cracked rock. Under the crack, the same couple

is drawn in a rudimentary stick-figure style. Judging by the patina, the sketchy engraving is almost as old as the one above it. Apparently, the elaborate engraving was etched in the rock at the time when a certain ritual commenced here, while the less elaborate sketch was engraved when the ritual was already a well-established routine-like ceremony.

Such engravings are very common to the Negev and are characterized by a pronounced dimorphism of the couple, which is maybe emphasizing the difference in gender, very much like in the case of *masseboth* (Avner 1990, see below). There are also many Thamudic inscriptions in the area which were interpreted as greetings and dedication to the dead (Tsafrir 1996), and were probably incised by pilgrims who arrived to the area to honor the ancestors. The two hills at the western end of the alignment are both topped by *tumuli* pairs that display the dimorphism mentioned above, namely: a large tumulus and a much smaller one to its left. Apparently, their age is identical to that of the elaborate engraving on the cracked rock. Hence, the reason that led to the planning of the alignment may be inferred, and related to ancestor worship, dead cult, rebirth, and transformation.

3.2. Betyls and Masseboth

Architectonically related to *tumuli* are the so-called *galei-ed* (sg. *gal-ed*, testimonial cairn). However, their function recalls that of *betyls*: they are witnesses to oaths, contracts and alliances – between people, tribes, or man and God. *Betyl* means literally “house of God” (*beth-el*). They are usually purposefully erected rocks, in which the divine essence was thought to dwell. Meteorites falling from heaven were especially valued, because of their origin in the abode of the sky-god. Only 50 years ago, the Bedouin were still using the *howdaj*, a curtained acacia-wood frame mounted on a very special camel, which was lined with ostrich feathers and housed a holy chunk of meteorite thought to possess supernatural qualities. The rock was instrumental in leading the people and the herd to good pasture, and it was also taken with on raids, which are so typical to pastoralist economy. The *merkab-el-howdaj* is reminiscent of the Ark of the Covenant, which was after all meant to house stone slabs, the witnesses of a contract made on a holy mountain. A black, cube-shaped meteorite rock known as *Cha’abu*, and thought to house *DuShara* was highly esteemed by the Nabataeans of Petra (Peterson 2006), and the *Ka’aba* of Mecca was apparently also a *betyl* that was worshipped long before the emergence of Islam (Achrati 2003).

Sacred stones are not singular to Semitic pastoralists and they have a long tradition with desert nomads. They are known as *masseboth* and are very common in the Negev and the Sinai. They stand mostly in shrines, alone or in groups, with pairs or triads being the most common combinations, but groups of five, seven and nine do also occur. They are generally facing east and many of them have at their base a carefully placed circular compartment. Offering benches, altars and basins are in many cases also accompanying them (Avner 1984, 2001). *Masseboth* are also found on *bamoth* (platforms) and associated with *tumuli*. The earliest of them are documented from the Negev, Sinai and southern Transjordan and date from the 11th and 10th millennia BCE (*ibid.*). *Masseboth* become very frequent from the 6th to the 3rd millennia BCE, a period that corresponds to the emergence and establishment of pastoralism, and they were commonly erected through the biblical period and even later. Pairs of *masseboth* are usually arranged as a combination of a tall and narrow stone with a short, broad one. The former are thought to represent male deities, while the latter may symbolize a goddess (*ibid.*). From the perspective of the gods who were supposed to be within the stones, the short *massebah* stands to the left of the tall and narrow one. This pattern, which reflects gender, is comparable to biblical references of male names before female ones, either in the case of gods or people. It is also reminiscent of the already discussed petroglyphs that emphasize the sexual dimorphism of a couple in praying posture, in which the smaller figure is generally drawn to the left of her tall partner.

In the rock art inspired by star-lore the pattern is also picked up and, from the perspective of the constellations, the figure of the goddess is placed to the left of that of the male deity (Steiner 2010).

In the early pairs of *masseboth* the female stones seem to dominate, while in later periods, which correspond to the crystallization of pastoralist values, the male stones apparently outnumber them. However, in the case of *masseboth* related to burials, the short stones representing the goddess become dominant, a tendency that may be related to the role of the goddess in rebirth and afterlife (*ibid.*). This seems to be also reflected in the orientation of the *masseboth*: in the desert, 89% of them are facing east, while in the fertile areas only 38% of them follow this orientation (Avner 2001). The parallel between the orientation of the already discussed alignments and that of the *masseboth* seems to be more than incidental.

4. The Compatibility of Pastoralist and Metallurgist Values

4.1. The Essence in the Rock

The symbolic encasement of the sacred in the rock is evidenced by the example of the *betyls* and *masseboth*, which were erected through the millennia in the deserts of the southern Levant. Suggesting an additional ritual function of rocks is the still not sufficiently documented use of turquoise and malachite (copper carbonates) as

intentional grave deposits. The occurrence of turquoise in the tumuli of Jebel Qabliat on the eastern flank of the El Qaa Playa in the southern Sinai, in the 6th millennium BCE (Close 1996) and of malachite in graves at Nag-el-Qarmila, not far from Aswan, during the Naqada II pre-dynastic period (Gatto and Giuliani 2007) may point to a ritual use of these minerals. Their presence at burial sites could be interpreted as related to after-life beliefs, like rebirth or transformation. The author has also found small pieces of malachite between the boulders of a tumulus on the Avdat Pateau, but these were never professionally evaluated. So far, in lack of sufficient data, the tentative correlations above are only proposed to motivate further research.

However, malachite must have played an important role in the symbolic thought of the period in which metallurgy emerged. Its essence is copper, and in the light of the previous paragraphs, a parallel between the essence encased in *betyls* and that present in malachite does not seem far-fetched, especially that this correlation may lead to a better understanding of the special status enjoyed by coppersmiths in pastoral societies. In the eyes of the nomad, the smelter was controlling the essence encased in the rock, which is copper, by subjecting it to his will. In order to produce the high temperatures (ca. 1950 °F) necessary to reach the melting point of copper, fire and air were also controlled. The constant flow of air, which is achieved with the use of bellows, is very similar to a strong and steady wind. The noun “*ruah*” in Hebrew is used to designate both wind and spirit, and its use in the smelting process may be likened to the spirit that brings the essence to life, and thus it becomes part of the ritual around the smith’s craft.

Molten copper, which flows out of the furnace in the shape of a serpent may be equated with the universal symbol of renewal for which the image of the snake is very often used. Copper and snake are words formed by the same root-letters in Hebrew. The story of the Biblical brazen serpent and the actual existence of such a cultic object, which was found in the miners’ temple at Timna (Rothenberg 1992) may suggest that the copper snake represents the divine essence, which is “*ruah*”, or spirit. In Biblical tradition, these two concepts are equated. The copper snake becomes the symbol of the spirit and the expression of its immortality. The furnace in its turn becomes the symbol of the womb.

In Fig. 3, the rock engraving at the left illustrates very well this journey of the spirit. From a furnace, a copper snake coils towards a two-horned circle. Under the circle, a parallel line to the snake’s advance can be noticed. Life is perceived here as the path of the spirit (the copper snake) from the womb (the furnace) to the grave (a *tumulus*, with a pair of *masseboth* topping it – the straight line that leads to the *tumulus* may be its east to west oriented tail). All the elements discussed up to this point are represented in this petroglyph: the tailed burial mound, the pair of sacred stones, the furnace and the copper snake. In order to correlate the engraving with another aspect discussed in the paper, namely star-lore, an imaginary petroglyph (drawn by the author) was inserted in the figure, a combination of the image of the goddess and the analyzed rock engraving. On the night sky, the two figures are in precisely this relative position to each other and they also conform to the east to west orientation. The stars on which the figure of the goddess is traced were already mentioned. Those, which contour the second engraving belong to an asterism located between the constellations Lacerta, Pegasus and Cepheus (the furnace), the outline of the edge of the Milky Way (the snake) and the head of Draco with its two prominent stars (the *tumulus* and *masseboth*). Life is following its path from the womb to the grave under the outstretched, guiding arms of the goddess responsible for rebirth and transformation.



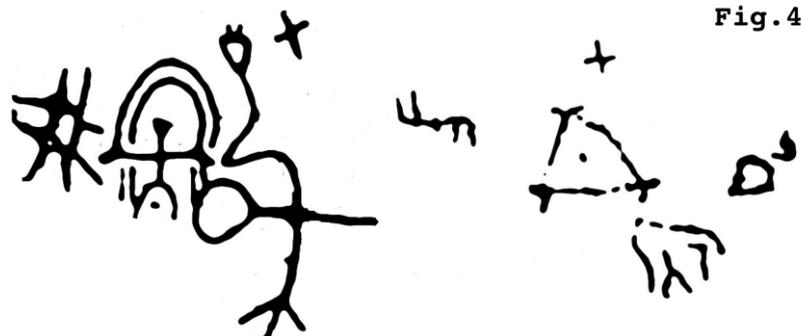
Fig. 3

The advance of the spirit towards Antares (pointed out by the snake-arm of the goddess) may imply that this bright-red star that dominates the summer sky is related to Aldebaran, its corollary red star in the winter sky, to which the middle finger of the opposite hand of the goddess points. It seems that these two stars play a key-role in after-life beliefs and that their heliacal or nocturnal rising or setting at the beginning or the end of the seasons with which they are associated determined the east – to – west orientation of archaeological complexes.

The role played by the two red stars in Bedouin star-lore must not be reduced solely to their association with the rainy and the dry seasons. The color of these stars seems to be also important. In African beliefs the red color of copper is a symbol of renewal and transformation (Wilmsen 2009), and in many prehistoric second-

burials the bones were painted with red ochre, a practice that stresses the importance of this color in after-life beliefs.

The goddess in the figure is to be found at the left of the sky-god of the nomad. This is evidenced not only by the shapes and relative position to each other of *masseboth*, and by the dimorphism in the rock engravings that depict the couple with raised arms, but also by the actual position of the goddess in the sky. Draco, the most centrally located constellation, was perceived as the seat of the sky-god. The ibex symbol was often used to represent this constellation, which in later periods would be replaced by the figure of a pregnant she-camel (Eisenberg-Degen and Rosen 2013). In many cases, a dot is incised either in the body of the camel (to emphasize its pregnancy) or inside the figure of the ibex (which usually represents the polar star or symbolizes the gestation period). Noteworthy here is the reliable character of this constellation, at the center of the circumpolar area. In the figure below there is another imaginary petroglyph drawn by the author with the purpose to illustrate the various symbols used to represent the constellation.



At its left (from the perspective of the constellations) one can notice the image of the goddess. The rock engraving at the right is found on Har Mehia and it is relatively recent, from a period when the Thamudic alphabet was already in use. However, it illustrates a continuity of traditions, even that it also expresses a shift in symbolism: the ibex and camel motifs are replaced with that of a furnace. The dot inside the furnace represents pregnancy in a figurative way: it is the divine essence in the rock, which becomes copper. The inscription in the petroglyph displays the Thamudic letters *yod* and *he*, placed inside a third letter (*beth*), very much like the rock inside the furnace. It reads “*beth Yah*” – the house of God. (Harris and Hone 1997).

4.3. Semitic Beliefs

An excavation on Har Karkom (Anati 1986) unearthed in a *gal-ed* (testimonial mound) built out of black rocks, a calcareous white stone, intentionally shaped as a semicircle and weighing 97 pounds. It was apparently very consciously placed on a large rectangular boulder, and the crescent-like shape of the white stone made the archaeologists to consider again the possible relationship between the moon-god *Sin* and the mountain. Near the stone there was an Early Bronze Age flint scraper and the *gal-ed* was dated according to the age of the scraper. There are around 7,000 engravings of ibex on Har Karkom, (*ibid.*) and it seems very probable that the mountain was dedicated to the moon-god *Sin*, whose cult arrived in the region together with Semitic nomads from Mesopotamia, at around the time to which the testimonial *tumulus* was dated (3,000 to 2,600 BCE).

At approximately the same time (3050 to 2650 BCE), a megalithic crescent-shaped *rujum* (cairn) was erected in the Galilee. It is locally known as *Rujum en-Nabi Shua'ayb*, or Prophet Jethro's Cairn. The proposed interpretation for the site is that it constituted a prominent landmark in its natural landscape, serving to mark possession and to assert authority and rights over natural resources by a local rural or pastoral population. There is no evidence for a permanent settlement near the structure. According to the archaeologist working on the site (Wachtel 2014), the monument's shape, a crescent, may have been chosen to symbolize the ancient Mesopotamian moon god *Sin*. Wachtel also noted that an ancient town called Bet Yerah - “house of the moon-god” in Hebrew - is only a day's walk from the monument.

The main centers of the *Sin* worship were Ur and Harran, places with which Abraham is associated. Between 2,600-2,400 BCE Ur exercised a large measure of supremacy over the Euphrates Valley and *Sin* was regarded as the head of the pantheon. It is believed that the cult of the moon-god was introduced to Mesopotamia by Semitic nomads from Arabia. The wives of *Sin* (moon) were *Shamash* (sun) and *Ishtar* (Venus). However, the sun would gradually lose her role and the two wives would become the morning and evening star aspects of Venus.

Herodotus (see Peterson 2006) relates that the Arabs worshipped *Dionysus*, whom they call *Orotalt*, and *Aphrodite*, whom they call *Alilat Sin*, the ibex, was probably interpreted as *Dionysus* the satyr. As for the etymology of the name *Orotalt*, the *Brewer's Dictionary of Phrase and Fable* (1890) attributes it to a corruption of *Allāh ta'āla* (“God exalted”). This Dionysian reference will be dwelt upon in detail, below.

The closest relatives of the Hebrews, the Edomites, are thought to have worshipped a deity called *Qos*, who was apparently also related to the ibex and the moon: his name comes from the Edomite “*kaush*” and Hebrew “*keshet*”, which both mean “bow”, a probable reference to the shape of the horns of the ibex. A horned *stela* from Petra inscribed *Qos-Allah* and a seal from Tawilan, also identified with *Qos*, and which displays a star and crescent, seem to consolidate the ibex-like symbolism surrounding the Edomite deity. The star beside the crescent is evidently *Atart – Ashrat – Ishtar*. Ibex engravings with exaggerated bow-like horns are also known from Har Karkom and other sites in the Negev Highlands.

The Nabataean *DuShara*'s (a name related to “*sa'ir*”, which is the Land of Se'ir, but it also means hairy, goat or ibex, and is also another name for Esau, who dwelt in Se'ir) partner was *Al-Uzza* or *Allat*, whose two names reflect again the two Venus wives of the moon, as personifications of the morning and evening stars (Peterson 2006).

In South Arabia, the star and the crescent were commonly-used symbols, and the worship of the Arabian high god *Allah* was associated with that of the goddess *Al-Uzza*, who is long forgotten, but still persists in the emblem of Islam, very much like her counterpart *Ashera*, as the tree of life or *menorah*, the symbol of Judaism (the *menorah*-like petroglyphs on Har Karkom and other places are most likely representations of the goddess).

Coppersmith and pre-Semitic nomadic symbolism were compatible with the Abrahamic beliefs described above. The role of the ibex and its sacredness were already mentioned. Male and female *masseboth* were the counterpart of the *Sin – Ishtar* partnership. Symbols of renewal were important to both coppersmiths and nomads, and the descendants of Abraham were also pastoralists. The goddess at the left of God, so often depicted in rock art related to star-lore was recognized as *Ishtar – Ashera*. The moon itself is a universal symbol of renewal, like the serpent. The pairing of the two was also known in the Mesopotamian homeland, it is common in Ur and it also occurs in South Arabian symbolism.

4.4. The Semitic Gods of Egypt

A nude goddess, often standing on a lion and holding a snake in her left hand, and lotus flowers in her right, is a familiar figure to archaeologists working on Late Bronze Age sites (ca.1500-ca.1200 BCE) throughout the Levant. Scholars have identified her with *Ashera / Astarte*, partly based on the assertion that, in the Ugaritic texts, *Ashera* is called the “Lion Lady” (Patai 1990; Wiggins 1991). However, other scholars think that the Ugaritic texts that also name this goddess as the “Holy One”, or *Qadesh(a)*, are actually references to the Egyptian *Qetesh*, or *Qudshu* (Cross 1973; Binger 1997; Pettey 1990).

Between 2000 and 1700 BCE, Egyptian kings often campaigned in the southern Levant and took captives whom they brought back to Egypt as slaves. Conversely, nomadic Semites (*Shasu*) migrated into the Nile Delta in search of food and fodder (*cf.* Steiner 2010). Many of them stayed and, of course, they brought their gods with them.

In the early seventeenth century BCE, Asiatics invaded and usurped the throne of the pharaohs. Although they formally adopted Egyptian divinities, it is clear that their real allegiance was to *Astarte*, *Baal*, and other Levantine deities. These *Hyksos* invaders, “rulers of foreign lands” (Redford 1992), were expelled around 1550 BCE.

Captive Asiatics poured into New Kingdom Egypt, as did Canaanite traders, some of whom founded a temple for *Baal* and his consort *Astarte* at Memphis. Soon, even the pharaohs were worshipping Canaanite deities, especially during the Ramesside period (1300-1200 BCE).

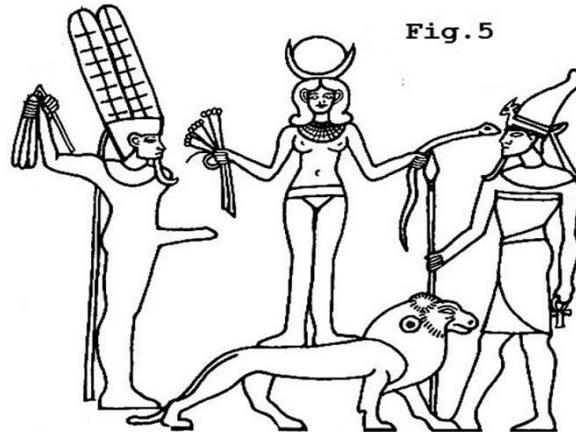
A number of Egyptian relief plaques from this period depict a nude goddess, usually standing on a lion, and sometimes posed between the Canaanite god *Resheph(h)*, an Underworld deity, and the Egyptian fertility god, ithyphallic *Min* (Cornelius 2004; Binger 1997). The Egyptians called her *Qetesh*, *Qedeset* or *Qudshu*. Among her titles were “lady of heaven, great of magic, mistress of the stars” (Cornelius 2004). According to these epithets, *Qetesh* was a very great deity indeed, though seemingly she was not included in the cultic practices of royalty and the elite (*ibid*). “Lady or queen of heaven” was an attribute shared by the greatest of Eastern Mediterranean goddesses: *Inanna* and *Ishtar* of Mesopotamia; *Asherah*, *Anat*, and *Astarte* of Syria and Canaan; *Isis* of Egypt; and *Aphrodite / Venus* of the Greco-Roman world.

One fact seems clear: the images of Egyptian *Qetesh* are very similar to those on the aforementioned plaques, pendants, and figurines from Syria – Canaan. Indeed, according to Binger (1997: 57), these depict a goddess “who, iconographically, is practically identical to Egyptian depictions of *Qudshu*”.

Moreover, the *Qetesh* plates described and published by Binger (1997) and Cornelius (2004) are surprisingly similar in composition with the depictions of the goddess to whom this essay is dedicated. In the plate reproduced below, the goddess is shown in a context that is almost identical in concept to her depiction in the Nahal Zin engraving (p. 33, Fig. 1, left), or in Fig. 2 (p. 34), which is an imaginary drawing that emphasizes her mediating role between the “cursed” and the “blessed” seasons.

The zoomorphic, ibex-inspired figure that was identified with the fertility brought by the rains that fall in the period dominated by the constellations Orion and Taurus is to the right of the goddess. Her exaggerated fingers

are reminiscent of the five lotus flowers offered to Min in the Egyptian depiction. It does not seem too far-fetched to identify – conceptually – *Min* with *Dionysus* the satyr (or with *Orotalt*, see Herodotus). Sex, fertility, orgiastic rituals, and plenty are concepts associated with this deity. To the left of *Qetesh* (from the goddess' perspective), the Canaanite *Reshep(h)* may be identified with the heat, draught and hardships of the dry season. The lizard suggested to be the constellation Bootes in Fig. 2 may symbolically represent *Reshep(h)*, who was thought to fight plague and pestilence, symbolically depicted as snakes and scorpions that attack the Bootes figure in the engraving discussed. Moreover, the animal associated with *Reshep(h)* is the gazelle, while that associated with *Dionysus* is the ibex. *Min*'s domain was the Eastern Desert, which is also known for its large stands of *capra ibex nubiana*, an animal that cannot be found west of the Nile.



Not surprisingly, the goddess in the Nahal Zin petroglyph (Fig. 1, left) is depicted between an ibex and a gazelle. Very much like in the *Qetesh* plate, she holds a snake in her left hand, pointed towards *Reshep(h)*. The goddess of fertility and sacred ecstasy (Cornelius 2004) stands in the center of the plate (Fig. 5, above). Her name denotes her Semitic origin (*q-d-š*: sacred, holy). The root letters that form her name also locate the center of her worship: Kadesh, in the Negev Desert. Interestingly, the composition is also geographically correct: the goddess stands between the dark-skinned *Min* of the Eastern Desert and the bearded *Shasu*-like Canaanite *Reshep(h)*.

Moreover, *Qetesh* is shown with the headdress and ears of *Hathor*, the patron-goddess of the copper miners at Serabit el Khadim and Timna. Conversely, the “Holy One” is also associated with the tin, copper and bronze trade (*ibid.*; Steiner 2010). Tin - without which there is no bronze – was mined in the Eastern Desert, in *Min*'s territory. Copper deposits occur in the southern Levant, the domain of *Reshep(h)*. Kenite caravans (see below) travelled between these territories and crossed the lands of *Qetesh*.

5. Shamans to Prophets

5.1. The Ibex and the Copper Snake

The ibex symbol, as it was already mentioned, served to represent not only the location of the seat of God in heaven, but because of the mediating role of the shaman between the two worlds, it was also meant to symbolize the shape he assumed when fulfilling his ritual role. The smelters' mastery of the essence in the rock and the awe inspired by his craft, added to the symbolic similarities related to renewal, rebirth and transformation, elevated the status of the smith in the eyes of the nomad. Smelting is creation: the essence in the rock is materialized and the shapes taken by the molten copper are infinite. The breath of the smith, like that of God, lends life to matter (Amzallag 2008). The smelter became slowly the ritual specialist of the tent-dweller and assumed the shape taken by the shaman. Thus, the ibex would become his alter-ego, and the copper snake the symbol of his power. Drawings that depict the ibex and the snake together are a common motif in the rock art corpus of the Negev, and are based, in the author's view, on the role fulfilled by smiths in the spiritual life of the nomads. The special status of coppersmiths with nomadic tribes is well-described in literature (Glubb 1943; McNutt 1994). and may be explained with the help of the suggestions sketched above.

5.2. Inferred and Suggested Ritual Context

Dionysus the satyr is associated with wild, wine-induced “orgies”, which in our case should be understood in a milder, ritual-related context. According to Amzallag (2008), such “celebrations” were characteristic to coppersmiths. The Greek word *techné* denotes not only technology, but also art and magic, and it is precisely in this holistic context that the initiation rites of the coppersmiths were performed (*ibid.*). However, in parallel with

specialized metallurgist ceremonies, the riddle of after-life was apparently also addressed by such rituals. The death – life cycle stands under the patronage of *Alilat*, the consort of *Orotalt / Dionysus*. It is reasonable enough to think that Herodotus referred in his *Histories III* (cited by Peterson 2006) to *Atart*, or *Ashtart*. As a Greek, he also called the goddess *Aphrodite*, and associated her with fertility. *Kypris* was the name of a Cypriot goddess who underwent a metamorphosis into *Aphrodite* when *Astarte* was imported (purportedly together with the alphabet) from Phoenicia (Budin 2014). *Aphrodite Kypria* was the name under which the goddess was also known, but not only because she was born in Cyprus, but also because of her relatedness to the copper for which the island was well-known in the antiquity (*ibid.*). As *Sin*'s consort, the goddess was also directly related to the moon, namely the lunar phases. Again, fertility comes to mind, but within a context defined by renewal and transformation, in a rather “*Dionysian*” sense, as suggested above. The cult of the Egyptian *Qetesh* and her association with *Min* were described above, and fit perfectly with the ritual context outlined in this paragraph.

According to Federico Mailland (2015a), swastikas and crosses engraved within the horns or the legs of ibex represent the full moon, in connection with the crescent (the horns). The swastika symbol represents both the moon's radiating disk and the movement of the disk in the sky. Such scenes are likely to represent a myth of the lunar cycle in relationship with the ibex image. Although the engravings were etched in the rock by a society of herdsman, there seems to be no relationship between the depictions and subsistence techniques. Mailland continues to argue (*ibid.*) that the moon cycle depicted in rock art symbolizes the opposition between life and death, and also the new life that commences after death. Furthermore, he stresses on the parallel between the duration of the moon cycle and the menstrual cycle in women, which accounts for the association of the moon with fertility, and illustrates the relationship between the moon and the origin of life.

The lunar crescent and disk are depicted together with the figure of the ibex not only in rock art, but also in cultic bronze figures of the period, like incense burners from the Yemen. Snakes are also shown on these incense burners that were purportedly used in fertility rituals.

Understanding such engravings as mundane hunting scenes (Eisenberg-Degen and Rosen 2013) is far from realistic, especially because the human stick figures depicted in many of these petroglyphs either touch the horns of the ibex with their bare hands or with the tip of their spears, in a “power-tapping” attitude (Mailland 2015a, 2015b; Steiner 2016).

The social context within which the beliefs and preoccupations enumerated above became crystallized may be safely defined as reflecting the rise of a pastoral elite (Rosen 2007) and the consolidation of its values in time. In this, ritual must have had an important role. Indeed, the period witnesses the parallel rise of a ritual elite. The ritual specialists of the Late Neolithic – Chalcolithic – Early Bronze Age are functionally different from the healers, medicine men and sorcerers who preceded them in the Mesolithic and Early Neolithic (Otte 2009; Steiner 2016). However, the techniques employed in their rituals – and ritual is known to be conservative – are apparently not very different from those that characterize earlier generations of ritual specialists. The full transition from shaman to priest would occur only in parallel with the rise of political entities. In the case of sedentary societies, the transition took place at an earlier stage, thus the only niche open to the desert-shaman would be that of the “prophet”.

A good approximation of the rituals performed in this transitional phase may be observed, in the author's view, at the rock art site situated on the eastern end of the already discussed Zin-Mehia alignment. All the elements that are usually associated with ritual behavior are present. *Entoptics* (Lewis-Williams and Dowson 1988) are engraved on a number of rocks. These are abstract geometrical patterns known from all over the world. Their interpretation is an interdisciplinary subject, as *altered states of consciousness* (ASC) are involved. ASC in its turn is closely related to ritual, magic and art. *Paganum harmala* (Syrian rue) seeds mixed with *acacia spp.* gum produce a DMT-rich narcotic that was still widely used by Bedouin ritual specialists in the recent past, in order to achieve the altered states that allowed to communicate with the ancestors, or to integrate with the natural cycles discussed above (Kent 2010). *Cupules* that may be associated with musical activities (Morley 2003) are also present. The site is also characterized by excellent *acoustic properties*, the ritual importance of which was recognized and studied in-depth (Garfinkel and Waller 2008). By striking any cupule engraved in the rocks on the eastern bank of the *wadi*, the echo comes back from the western bank, but not haphazardly: the reflected sound-wave returns from the fissured rock on which the already mentioned elaborate and sketchy praying couples are engraved. The sound seems to emanate from the crack in the rock. The ritual significance of this phenomenon is documented from many rock art sites, world-wide (*ibid.*).

In summary, without recurring to exotic hermeneutics, there is sufficient empirical evidence to suggest that a ritual behavior that “celebrated” the time-specific beliefs addressed in this paper was an integral part of the spiritual landscape of the ancient Negev and its neighboring areas.

5.3. The Ritual Role of Coppersmiths with Pastoral Societies

In the Bible (Genesis:4), the list of the descendants of Cain mentions in the same breath the two sons of Lamech: “Jabal, the father of those who live in tents and raise livestock”, and his brother “Tubal-Cain, who forged all kinds of tools out of bronze and iron”. That nomads and smiths belong to the same generation was apparently

obvious to the compilers of the Old Testament, a fact that is also reflected in the archaeological record. Moreover, besides being contemporary in time, metallurgy and pastoralism emerged and evolved under the same desert sky. The values and beliefs that emerged and became established in the same geographical area, between the 6th and 3rd millennia BCE must have been characterized by a high degree of affinity. The attitude to animals and metals was very similar: animals were bred and metals were alloyed in order to achieve enhanced qualities, like milk or wool output in the case of animals, and hardness, color, etc. in the case of metals.

The relation of coppersmith societies with pastoral nomads was always special, bordering on the mythical. Smith tribes, like the Kenites, who are identified as the descendants of Tubal-Cain, are known to have existed not only in the ancient world. In 1161 Benjamin of Tudela mentioned the Recabites of Yemen, who were the allies of tent-dwelling Arabs, and 700 years later, the Reverend Joseph Wolff would encounter them in the same area.

Actually, one such group is known among the Bedouin to the present day. They may not be the genetic descendants of the Kenites, but they seem to fulfill the same functions. The *Solubba* are travelling smiths who follow regular trade routes and act as musicians, scribes, circumcisers and fortune-tellers. Such a tribe must be nomadic, since its skills are required over a large area and they also have a reputation for magic, because of the awe aroused by the ability to work metals (Glubb 1943; McNutt 1994; Betts 2003).

Tubal-Cain's sister was Naamah and another brother was Jubal, "the father of all who play the harp and flute". It seems that Tubal-Cain, Naamah and Jubal are personifications of the roles mentioned above and that there is a long tradition of cooperation between smiths and nomads on the ritual level. The services rendered by Jethro the Kenite to Moses and the ritual function that he fulfilled with the Midianites only point to that (Jethro is identified as a priest of Midian, but not a Midianite). Like the *Solubba*, who are associated with a number of Bedouin tribes (Doughty 1888; Musil 1907; Glubb 1943), the Kenites are mentioned in the Bible as accompanying not only Midianites (Exodus:2,18) and Hebrews (Numbers:10), but also Amalekites (1Samuel:15) and Edomites (Numbers:24), to whom they must have also provided their services as ritual specialists, musicians, prostitutes, scribes and fortune-tellers.

The *Solubba* are also known as guides and healers. Above all, they are neutral, thus their tents are considered to be places of refuge and they are also often solicited to judge in disputes (McNutt 1994). This recalls again the story of Moses, who found refuge with Jethro in the Land of Midian, and the latter's advice in the organization of the Hebrew judicial system (Exodus:18). The coppersmiths were feared and respected (Glubb 1943), mostly because of the magic related to their craft, which granted them their special role as the ritual specialists of the nomads. The general belief is that the *Solubba* had degraded to their present status from a previous high position (*ibid.*), hence the smith – nomad relations of today are only an echo of the strong partnership that must have existed between them in ancient times, and only started to deteriorate at the beginning of the Iron Age (Amzallag 2008).

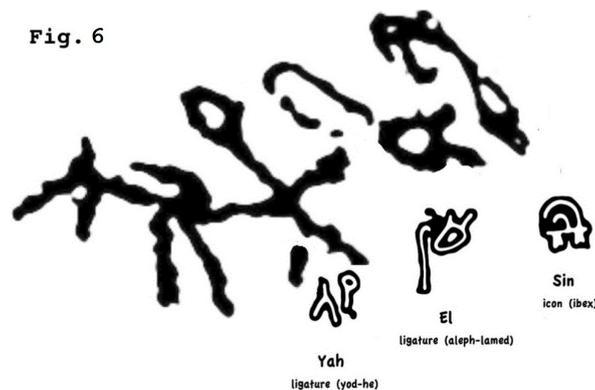
5.4. Desert Fundamentalism

Some of Jethro's people were solicited to render their services as desert guides and joined the Israelites on their way to Canaan (Numbers:10). Their descendants continued to live "among the people of the Desert of Judah in the Negev near Arad" (Judges 1:16), which became "the Negev of the Kenites" (1Samuel 27:10). Arad was a major urban center during the Early Bronze Age that was abandoned long before the Israelite conquest. When Arad was resettled, immediately after the Ramesside period, the new inhabitants, who were apparently not Israelites, but presumably Kenites, built an unenclosed settlement (*stratum* XII), in the centre of which, a rectangular platform resembling an altar was found. Centuries later (*stratum* XI), an Israelite altar was built on top of it, and the remains of a temple structure bearing a marked similarity to Solomon's Temple in Jerusalem was unearthed from the same Israelite layer. A pair of *masseboth* was also found in the holy of holies of this temple (Aharoni 1967). The Arad Temple and its *masseboth* survived the religious reforms of both King Hezekiah in the 8th century BCE and King Josiah a century later, and it was apparently destroyed either by the Babylonians, or the Edomites, when the latter took over Judah after the Babylonian conquest. In the author's opinion, the presence of the temple was tolerated only because it served the nomadic, non-Israelite population around Arad. It is generally accepted that the Kenites continued to pursue the nomadic life and that they were champions and defenders of the monotheistic desert faith against the cult of the Canaanite gods. The story of these Kenites is known only from biblical references, and what we tend to forget is that they were the descendants of only a fraction of Jethro's clan, which in its turn was only a segment of the Kenites who were associated with Midianites, Amalekites and Edomites. As coppersmiths, guides, musicians, scribes and ritual specialists, they must have roamed the deserts of the southern Levant, in association with the nomads whose encampments ranged from Moab to the northern Hejaz. Even in southern Judah, the Kenites were wedged between the Judahites and Edomites and the route of the Arabian trade ran through this territory inhabited by pastoral nomads (Bienkowski 2001). Their previously high status with the wandering Israelites apparently deteriorated with Iron Age Israel, which became a settled, and politically-centralized entity. Iron and copper are also functionally different: the cultic approach to copper that granted the smith's mythical status was gradually

replaced with an industrial approach to iron, in which the smith was degraded to the position of a mere laborer (Amzallag 2008). Religious fundamentalism and the exalting of nomadic values may be interpreted as a reaction against settled life, which was perceived as leading to apostasy. In the same spirit, the Recabite clan was known as a conservative, fundamentalist fraction of the Kenites, and who were tent-dwellers and ardent defenders of nomadic values. They are the descendants of Hammath the Kenite (1Chronicles 2:54) and not surprisingly, some of them are also identified as scribes. Invited to drink wine, they replied “we do not drink wine, because our forefather Jonadab son of Recab gave us this command: Neither you nor your descendants must ever drink wine. Also you must never build houses, sow seed or plant vineyards; you must never have any of these things, but must always live in tents.” (Jeremiah:35). Interestingly, Jonadab’s credo would be repeated word-for-word a few hundred years later, by other nomads who established themselves in the Land of Seir: the Nabataeans (Negev 1961). *DuShara*, the main god of the Nabataeans seems to be related to the Biblical Lord of Seir, and it is improbable that the deity was worshipped by the Nabataeans before their arrival in Edom. It is not too far-fetched to think that *DuShara* was adopted by the Nabataeans under Kenite influence, very much like the Lord of Seir by the Hebrews, as the Kenite hypothesis argues (Parke-Taylor 1975; Blenkinsopp 2008). Taking into consideration the role fulfilled by the Kenites with the nomadic tribes of the southern Levant and the special status that was granted them because of the magic inherent in their craft, the theory that the Lord of Seir was initially an Edomite god of metallurgy (Amzallag 2008, 2009; Steiner 2010) seems to be built on solid fundamentals. The presence of a fundamentalist metallurgist group in the deserts of the southern Levant and northern Arabia that was associated with, and exercised influence on the beliefs of the ethnic groups that inhabited the area through the millennia cannot be dismissed.

5.5. Thamudic Parallels

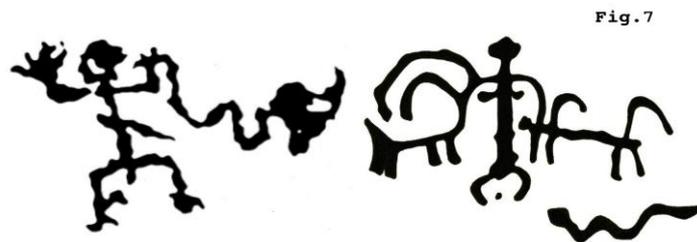
The Thamudic tribes were the contemporaries of the Nabataeans in northern Arabia and Edom, and infiltrated the Negev towards the end of the Nabataean period. Many of their inscriptions have a religious character, which has led some scholars to propose the existence of a script that should be classified as different from Thamudic-proper (Harris and Hone 1997). Although this proposal seems far-fetched and it must be considered as a mere presumption, its initiators must be given credit for their recognizing a tendency in writing in which icons and ligatures are used instead of letters, especially in the case of religious inscriptions. This suggestion would deserve a scientific investigation. The most frequently used symbols – according to Harris and Hone - are those of the ibex and the snake. Therefore, they argue that rock engravings that at first sight seem to be drawings should rather be read than interpreted. In the figure below there is a hypothetical illustration of how some petroglyphs should be looked at, as suggested by the aforementioned authors:



The “discoverers” of the script stress its archaic character and they liken it to Proto-Sinaitic. They date it to the Iron Age and link it to the revival of the cultic activity in the Negev during this period. Most of the inscriptions are documented from Har Karkom, the Nafha Plateau and Nahal Avdat. The content of the inscriptions, along with their chronology and location suggest that the scribes were speakers of a language best expressed through Old Hebrew transliteration, rather than the Thamudic dialect, which is a variant of Arabic. The ethnic ties of the scribes may include Kenites, Edomites or Midianites. If the Harris-Hone hypothesis would be scientifically-grounded, the scribes could be identified with the fundamentalist Kenites or Recabites mentioned above. The spatial distribution of the inscriptions, between the Kenite territory in Southern Judah and Har Karkom would also be significant and it could be an indicator to the existence of a pilgrims’ route frequented by fundamentalist groups that led to one of the holiest mountains in the region, one of the most plausible candidates for Mt. Sinai: Har Karkom (Anati 1986).

Smiths are often identified as scribes, and the discovery of the alphabet may be attributed to them (Amzallag 2008). The Proto-Sinaitic script was identified only at three locations, all of them in mining districts: Serabit el Khadim (1,600 BCE) in the Sinai, Wadi Hol (1,900 BCE) in Upper Egypt, and recently Timna (1,300 BCE), in the southern Arabah (Wimmer 2009). This alphabet, which is meant to express a Semitic language, is a marvellous feat of “engineering”: the three consonants, which form the unchangeable root-letters of a word are perceived as the inert raw material that comes to life with the help of the inhaled or exhaled wind (“*ruah*”, spirit). The metallurgical implications are evident. Therefore, the alleged presence of an archaic script used in religious contexts by conservative elements during the Iron Age should be considered and researched.

Fig. 6 (left) depicts the icon that was so frequently discussed in this paper, with the difference that what was always identified as a drawing of a goddess, is represented in this Thamudic engraving from southern Jordan with markedly male characteristics. The same tendency is noticeable in the case of the “written” petroglyph in Fig. 5, in which only the names of God are featured, but the name of the goddess - whom the drawing supposedly represents - is utterly ignored. There is even a later addition to the petroglyph: a lighter patinated leg that not only that it facilitates its “reading”, but it also underlines its maleness. The correction was made in a period in which the prophets were doing everything in their power to dethrone *Ashera* from her place at the side of God, and the petroglyph may illustrate this tendency. The same logic must hide behind the Jordanian engraving (left), although this is located in a territory where the prophets of Israel did not have any influence. This only seems to consolidate the presumption that monotheistic fundamentalism enjoyed a revival in the deserts to the south of Canaan, and that the identification of the scribes mentioned above (or their descendants) with the “artists” who engraved one of the petroglyphs and corrected the other does not seem improbable. Interestingly, in southern Arabia, *Ashtart* was a male god, while in northern Arabia a markedly female deity (Achrati 2003). Thus, such a fluidity in gender must have been perceived without too much ambiguity by the inhabitants of Iron Age northern Arabia and the southern Levant. Along the Arabian Trade Route (Bienkowski 2001) it was not only myrrh and frankincense that was traded, but ideas, too.



Quite the opposite tendency can be noticed in the second illustration (right), which is a rock engraving traced by the author, on the base of a photograph provided by one of the initiators of the theory detailed above. The original engraving is – according to Harris and Hone - found in Spain, not far from Cadiz (a Punic colony). It is known to the locals as “Aphrodite” and may be indeed a depiction of the goddess, whose cult was introduced to Greece from Phoenicia. To the Carthaginians, she was known as *Tanit*, who was a metamorphosis of Phoenician *Astarte*. In the illustration above the goddess appears in her original fertility-related aspect, a fact which is evidenced by the markedly feminine characteristics of this apparently Punic drawing. Although the composition is very similar to that found in Nahal Zin (Fig. 5), there is one major difference between them: while the snake is only an element in the Carthaginian drawing, in the Nahal Zin engraving it is held by its tail by the central figure. In the petroglyph from Jordan, the male figure - who may be even a representation of the coppersmith-shaman - seems to control not only the snake, but everything that it symbolizes.

Related to the Thamudic people, there is a Qur’anic reference, which is also open to metallurgical interpretations (Surah 7:73-79). It relates the story of the Prophet Salih, who performed a miracle to prove the existence of God to the unbelievers. A miraculous ten-month pregnant she-camel issued from the rock. The story is set in Al-Hijr, or Egra, known today as Mada’in Salih, in the honour of the prophet. The name is identical to Petra and Sela, both in the Land of Seir, and the literal meaning of all these names is “the rock”. The camel emerges from the rock, very much like the copper snake, and the miracle performed by the shaman in bringing to life the divine essence in the shape of a copper snake may be equated to that of the prophet, who makes a she-camel issue from the rock. Both performances are meant to impress the skeptics, and the means employed by both the shaman and the prophet are identical. The snake, as it was already mentioned, is a very common motif in rock art. The figure of a she-camel with a dot incised in its hump, which represents pregnancy, is also very frequent, and it was often referred to in this paper. It is identified by the Bedouin with the constellation Draco as the camel, and the star Kochab (Ursa minor) as the dot, and it is shown to the children as an illustration of the Qur’anic story and as a reminder of God, whose existence was demonstrated to the people of Thamud with the miracle performed by Salih. It is precisely in this context that star-lore and its relatedness to rock art should be understood.

CONCLUSION

Although tendencies related to death cult, astronomical alignments and the motif of cyclic renewal were recognized in the archaeological record of the period that witnessed the emergence of nomadic pastoralism, the approach to these subjects was either over-cautious or speculative in character and did not pursue the interpretation of the data. The possible influence of metallurgy - a parallel development in time and space with that of pastoralism - was not sufficiently considered in these interpretations, if any. Contemporary nomadic oral traditions were utterly ignored and the longevity of the pastoralist economy was not recognized as a potential indicator of the continuity of beliefs and symbolism. The rock art corpus of the territory in which pastoralism and metallurgy emerged in unison was not sufficiently correlated with the values that characterize these economies, even that the majority of the rock engravings were dated precisely to the period discussed. Moreover, a paternalistic approach, which tended to look for "civilized" outside influences on "primitive" desert rock art was adopted in many cases.

In this paper we have offered a model in which a parallel approach to the interpretation of both rock art and archaeological data is suggested. A special emphasis is placed on concepts that seem to reflect the shift in values from agricultural to pastoral economies: the skyward orientation that seems to be inherent to nomadic culture, the reshuffling of the role played by gender in subjects related to fertility vs. cyclic renewal, and the association of the latter with after-life beliefs. These preoccupations seem to be expressed by the presence of astronomical alignments and various structures related to ancestor worship and mortuary cult in the archaeological record. This was correlated with nomadic star-lore, which was solely approached as the oral version of the same beliefs, but categorically not as sky-maps. Rock art was suggested to be a graphic illustration of the preoccupations mentioned above. The compatibility of metallurgical concepts and symbolism with those that can be inferred from the archaeological record of the same period was analyzed, and - because of their apparent functional relatedness - star-lore and rock art were tentatively associated with empiric data. Conversely, a ritual approach based on empirical indicators was also attempted. The millennia-long partnership between nomads and coppersmiths was explained with the biblically and ethnographically documented ritual functions of the latter, which was suggested to have happened because of the smelters' control over the symbols related to nomadic beliefs. However, the functions fulfilled by coppersmiths with Bronze Age nomadic groups seems to have lost in importance with the politically centralized sedentary population of the Iron Age. A radicalization of commonly-forged pastoralist - metallurgist values is observed during this latter period, which is traceable to the revival of cultic activities in the deserts to the south of Canaan, in the original nomadic context. Desert-prophets were suggested to be related to this radicalization and were presented in the paper as the functional descendants of the Bronze Age ritual specialists. The exaltation of nomadic values and the religious fundamentalism that accompanied it apparently led to a parallel radicalization of symbols, as evidenced by the suppression of the role played by a goddess in concepts related to after-life and cyclic renewal. The model proposed in this paper is meant to offer a coherent image of the tendencies that can be discerned in the peculiarities of the archaeological record, which are also reflected in rock art symbolism and oral traditions. The suggestions sketched here are also meant to guide and widen the field of future research, the results of which may test the conclusions reached in this essay.

REFERENCES

- Achrati, A.** 2003. Hand and Foot Symbolisms: From Rock Art to the Qur'an. *Arabica* L(4): 464-300
- Aharoni, Y.** 1967. *The Land of the Bible: A Historical Geography*. Westminster Press, Philadelphia.
- Amzallag, N.** 2008. *The Copper Revolution: Smelters from Canaan and the Beginning of Civilization*. Hamera, Shani-Livna.
- Amzallag, N.** 2009. From Metallurgy to Bronze Age Civilizations: The Synthesis Theory. *American Journal of Archaeology* 113: 497-519
- Anati, E.** 1985. Has Mt. Sinai Been Found? *Biblical Archaeology Review* 11: 4
- Anati, E.** 1986. *The Mountain of God*. Rizzoli International Publications, New York.
- Avner, U.** 1984. Ancient Cult Sites in the Negev and Sinai Deserts *Tel Aviv* 11: 115-131
- Avner, U.** 1990. Masseboth Sites in the Negev and Sinai and Their Significance. In J. Aviram (ed.), *Second International Congress on Biblical Archaeology in Jerusalem 1990*. pp.166-181. Jerusalem.
- Avner, U.** 2001. Sacred Stones in the Desert. *Biblical Archaeology Review* 27: 30-41
- Bailey, C.** 1974. Bedouin Star-lore in Sinai and the Negev. *Bulletin of the School of Oriental and African Studies* 14: 35-80.
- Bastoni Brioschi, R.** 1998. Arte Rupestre: Har Karkom e il Dio Sin. In F. Mailand (ed.), *Archeologia e Mito* pp. 21-38. Milano.
- Betts, A.** 2003. The Solubba: Nonpastoral Nomads in Arabia. *Bull. Of the American Schools of Oriental Research* 274: 61-69

- Betts, A.** 2004. Gazelle-hunters and Salt-collectors: A Further Note on the Solubba. *Bulletin of the American Schools of Oriental Research* 293: 79-81
- Bienkowski, P.** 2001. Southern Jordan and the Negev in the Iron Age: A New Model. *Bulletin of the American Schools of Oriental Research* 323: 21-47
- Binger, T.** 1997. Asherah: Goddesses in Ugarit, Israel, and the Old Testament. Academic Press, Sheffield.
- Blenkinsopp, J.** 2008. The Midianite-Kenite Hypothesis Revisited and the Origins of Judah. *Journal for the Study of the Old Testament* 33(2): 131-153
- Brewer, E.C.** 1890. *Brewer's Dictionary of Phrase and Fable* (24th ed.).p.841. Cassell & Company, London, Paris and Melbourne.
- Budin, S.L.** 2014. Before Kypris was Aphrodite. In D.T. Sugimoto (ed.), *Transformation of A Goddess: Ishtar – Astarte – Aphrodite*. pp. 195-217. Academic Press, Fribourg.
- Close, A.E.** 1996. Funerary Traditions and the Final Pleistocene-Holocene Sequence in South-Western Sinai. *University of Washington Archaeological Expedition to Sinai*. pp. 1-14
- Close, A.E.** 2002. Sinai, Sahara, Sahel: The Introduction of Domestic Caprines to Africa. In R. Kuper (ed.), *Africa Prehistorica 14: Tides of the Desert*. pp. 459-470. Köln.
- Cornelius, I.** 2004. The Many Faces of the Goddess: The Iconography of the Syro-Palestinian Goddesses Anat, Astarte, Qedeshet, and Asherah c.1500-1000 BCE. Academic Press, Fribourg.
- Cross, F.M.** 1973. *Canaanite Myth and Hebrew Epic: Essays in the History of the Religion of Israel*. Harvard University Press, Cambridge MA
- Doughty, C.M.** 2010. (first published 1888) *Travels in Arabia Deserta*. Cambridge Cambridge University Press, Cambridge.
- Eddy, F.W. and Wendorf, F.** 2002. Prehistoric Pastoral Nomads in the Sinai. In R. Kuper (ed.), *Africa Prehistorica 14: Tides of the Desert*. pp.41-50. Köln.
- Edwards, E.S.** 1955. A Relief of Qudshu-Astarte-Anat in the Winchester College Collection. *Journal of Near Eastern Studies* 14: 49-51
- Eisenberg-Degen, D. and Rosen, S.A.** 2013. Chronological Trends in Negev Rock Art: The Har Michia Petroglyphs as a Test Case. *Arts* 2: 225-252
- Garfinkel, A.P. and Waller, S.J.** 2008. Sounds and Symbolism from the Netherworld: Acoustic Archaeology at the Animal Master's Portal. *Pacific Coast Archaeological Society Quarterly* 46(4): 37-60
- Gilead, I.** 2002. Religio-Magic Behaviour in the Chalcolithic Period of Palestine: Smiths and Shamans Come From the Same Nest. In Oren and S. Ahituv (eds.), *Magic and Craftsmanship in 5th Millennium Palestine - Aaron Kempinski Memorial Volume*. pp. 103-128. Beer Sheva University Press, Beer Sheva.
- Glubb, J.B.** 1943. The Solubba and Ignoble Tribes of Arabia. *General Series in Anthropology* 10: 14-16
- Goren, A.** 2002. Nawamis of Sinai. *Archaeology Odyssey* 5: 1
- Haiman, M.** 2000. "The K-Line" at Har Romem in Light of the Survey of the Map of Har Romem. *Atiqot* 39: 21-29.
- Haiman, M.** 2002. (conference paper) (Enclosed Structures, Pens, and Pastoralism in the Negev and Sinai Deserts – Past and Present. *ASOR Annual Meeting*, Toronto.
- Harris, J.R. and Hone, D.W.** 1997. *The Names of God*. Brigham Young University Press, Salt Lake City.
- Kent, J.L.** 2010. *Psychedelic Information Theory: Shamanism in the Age of Reason*. PIT Press, Seattle.
- Levy, T.E.** 1983. The Emergence of Specialized Pastoralism in the Southern Levant. *World Archaeology* 15: 15-36
- Levy, T.E.** 1995. Cult, Metallurgy and Rank Societies-Chalcolithic Period. *The Archaeology of Society in the Holy Land*. pp. 226-244. Leicester University Press, London.
- Lewis-Williams, J.D. and Dowson, T.A.** 1988. The Signs of all Times: Entoptic Phenomena in Upper Palaeolithic Art. *Current Anthropology* 29: 201-245
- Makarewicz, C.A.; Horwitz, K. L. and Goring-Morris, N.** 2016. Local Adoption of Animal Husbandry in the southern Levant: An Isotopic Perspective from the Pre-Pottery Neolithic B Funerary Site of Kfar HaHoresh. *Environmental Archaeology*. pp. 1-16
- Mailland, F.** 2015a. Ibex, Crescent and Swastika as Symbols of a Lunar God in the Rock Art of the Ancient Near East and Central Asia. *Expression* 10: 48-53
- Mailland F.** 2015b. Ritual Ibex Hunting in the Rock Art of the Near East. In *The XXVI Valcamonica Symposium - Prospects for the Prehistoric Art Research: 50 Years Since the Founding of Centro Camuno*. September 9-12. pp. 159-162. Capo di Ponte.
- McNutt, P.** 1994. The Midianites, the Kenites, and the Rechabites as Marginal Mediators in Ancient Israelite Traditions. *Semeia* 67: 109-132.
- Morley, I.** 2003. (PhD Thesis) *The Evolutionary Origins and Archaeology of Music: An Investigation into the Prehistory of Human Musical Capacities and Behaviours, Using Archaeological, Anthropological, Cognitive and Behavioural Evidence*. Cambridge University, Darwin College, Cambridge.
- Musil, A.** 1907. *Arabia Petraea*. Holder Verlag, Wien.
- Negev, A.** 1961. *Masters of the Desert*. Putnam & Sons, New York.
- Otte, M.** 2009. The Paleolithic-Mesolithic Transition. In M. Camps & P. Chauhan (eds.), *Sourcebook of Paleolithic Transitions*. pp. 537-553.
- Parke-Taylor, G.H.** 1975. *Yahweh: The Divine Name in the Bible*. Wilfred Laurier University Press, Waterloo, Ontario.
- Patai, R.** 1990. *The Hebrew Goddess*. Wayne State University Press, Detroit, MI
- Peterson, S.B.** 2006. (M.A. Thesis) *The Cult of Dushara and the Roman Annexation of Nabataea*. McMaster University, Hamilton, Ontario.
- Petty, R.J.** 1990. Asherah, Goddess of Israel. In J.B. Pritchard (ed.), *The Ancient Near East in Pictures Relating to the Old Testament*. Princeton University Press, Princeton NJ.
- Pitre, M.C., Gatto, M.C. and Giuliani, S.** 2007. Site Surveys in the Aswan-Kom Ombo Region of Egypt. *Bioarchaeology of the Near East* 1: 59-72
- Redford, D.B.** 1992. Egypt, Canaan, and Israel in Ancient Times. Princeton University Press, Princeton NJ.
- Rosen, S.A.** 2003. Early Multi-resource Nomadism: Excavations at the Camel Site; Long Distance Trinket Trade: Early Bronze Age Obsidian from the Negev *Antiquity* 298: 749-760

- Rosen, S.A.** 2007. The Rise of Desert Cult: The Sacred Precinct at Ramat Saharonim, Central Negev. *Bulletin of American Schools of Oriental Research* 346: 1-27
- Rothenberg, B.** 1992. The Beginnings and the Development of Early Metallurgy and the Settlement and Chronology of the Western Arabah, from the Chalcolithic Period to Early Bronze Age IV *Levant* 24(1): 141-157
- Shepard, P.** 1998. *Coming Home to the Pleistocene*. Island Press, Washington DC.
- Steiner, G.** 2010. *Smiths and Prophets: The Curse of Cain on History*. Renetius, Zürich.
- Steiner, G.F.** 2016. Collective Dissociation: The Origins of Civilized Madness. In R.G. Bednarik (ed.), *Understanding Human Behavior: Theories, Patterns and Developments*. pp. 239-284. Nova Science Publishers, New York.
- Tsafir, N.** 1996. New Thamudic Inscriptions from the Negev. *Muséon* 109:1-22.
- Wachtel, I.** 2014. 'Jethro Cairn' – An Early Bronze Age site in the Upper Galilee, Israel: Function and significance. *9th International Congress on the Archaeology of the Ancient Near East*. June 9-13, Basel.
- Wiggins, S. A.** 1991. The Myth of Asherah: Lion Lady and Serpent Goddess. *Ugarit-Forschungen* 23: 383-394
- Wimmer, S.J.** 2009. The Discovery of A Proto-Sinaitic Inscription at Timna, Israel. *UAIr Journal of Ancient Egyptian Interconnections* 2(2): 1-12
- Wilmsen, E.** 2009. (ed.), *Tsodilo Hills: Copper Bracelet of the Kalahari*. Michigan University Press, Ann Arbor.
- Wolff, J.** 1835. *Researches and Missionary Labours Among the Jews, Mohammedans and Other Sects*. J. Nisbet & Co., London.
- 1996. *The Holy Bible, New International Version*. Zondervan Publishing, Grand Rapids MI.
- 2010. *Der Koran* (R. Poret transl.) Kohlhammer Verlag, Stuttgart.