of "I will be good" is irrelevant to its incarcerated, castigated state. The child of Le Guin's tale could not be liberated on account of its own action or inaction, nor is it there as a punishment for anything that it has done or neglected, but, by being there, it is become — within the unique terms of the mythos, and under the terms of the unwitting sacrificial role — an abomination, a corruption, a creature of blame. And that blame or corruption is irreversible, as the citizens of Omelas come to accept:

But as time goes on they begin to realise that even if the child could be released, it would not get much good of its freedom: a little vague pleasure of warmth and food, no doubt, but little more. It is too degraded and imbecile to know any real joy. It has been afraid too long ever to be free of fear. (ref. 1, pp. 282–283)

The child is and must be 'blameless' in the ordinary sense (to engender our rightful and necessary compassion) but just as the child soldier — or the child victim of sexual abuse, or the child of original sin in pre-Enlightenment thought — must be considered innocent and blameless, lacking in the capacity to be accountable or responsible for their violated state, so too are they corrupted in having knowledge or guilt beyond the proper sphere of the child.

What, then, have I gained in looking at Frodo through the lens of this archetype, if it cannot ultimately be squared with Tolkien's message of the importance of choice, personal accountability and the infinite possibility of redemption? I think that my appreciation of and compassion for Frodo's bravery and suffering has been increased. This is because analysis of his sacrifice as unwitting or unwilling (in that it is unavoidable or inexorable, part of a greater archetype and

mythos) mitigates the potential reading of Frodo's actions as not fully brave or unselfish. By this I mean that, given the chance to save the world by one's sacrifice, who wouldn't volunteer? Who wouldn't give their life for the cause? Who wouldn't elect to be the scapegoat for humanity — and earn a place in the Undying Lands along the way? Faith in the volunteer scapegoat is the logical adjunct to Le Guin's faith (which she accredits to American philosopher William James in her introduction) that there will always be some who "walk away from Omelas" and reject the terms of its happiness; so is it really so brave of Frodo to sacrifice himself? The traditional reading mitigates such diminution of Frodo's role by building the true value of his sacrifice and heroism around the slim odds of its success, but the 'scapegoat reading' mitigates it by making Frodo the innocent and inescapable heir to the sacrificial role and thus his ensuing misery and castigation constitute inexorable and irreversible corruption. Now that sacrifice, which negates the possibility of personal redemption, is bravery indeed. Lynn Whitaker is an AHRC funded doctoral researcher

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The Stone of Erech and the Black Stone of the Ka'aba: meteorite or 'meteor-wrong'?

KRISTINE LARSEN

mong the distinctive qualities of Tolkien's writing is his ability to seamlessly interweave scientifically accurate descriptions of the natural world into his legendarium. Even when astronomical and geological events are couched in the language of myth, such as the catastrophic changes in the world that occur whenever the Valar and Melkor engage in battle, there is much that is clearly recognizable as 'natural' and 'scientific'. As such, Tolkien's writings parallel the 'real world' patterns of geomythology. According to geologist Dorothy Vitaliano, geomythology is the study of the scientific motivation behind

seemingly fantastical and mythological stories passed down from generation to generation¹. By analogy, one can speak of 'astromythology', which searches for connections between mythic descriptions of heavenly battles and such phenomena as meteors, comets and auroras. A concrete example in the works of Tolkien is his use of meteors and meteorites. As recounted elsewhere²-³, I have found no clear pattern to Tolkien's usage of meteors in the legendarium. In some instances they are clearly meant as metaphor, as in the case of the King and Queen of Númenor who "fell like stars into the dark" at the destruction of their land⁴ or artistic licence (such as in

the poems Why the Man in the Moon Came Down Too Soon⁵ and Habbanan Beneath the Stars⁵) or as being emblematic of Melkor's nefarious powers in Arda Marred⁶.

Tolkien's usage of meteorites seems to be more consistent, in terms of their relationship to the deaths of dragons, whether the references be explicit, as in the case of Túrin's sword Anglachel⁷, or conjectured^{2,3}, as in the example of Bard's famous heirloom black arrow in *The Hobbit*⁸ and Eärendil's defeat of Ancalagon in the War of Wrath⁷. The identification of Bard's arrowhead with meteoric iron is based not only on the well-established connection between meteors, meteorites and dragons in classical mythology^{9,10} but also on its noted colour, which is reminiscent of the appearance of the fusion crust that is created on the exterior of a meteorite as it falls through Earth's atmosphere¹¹. The connection between the fall of Ancalagon and meteorites is asserted based on Tolkien's description of how before sunrise brilliant Eärendil "cast him from the sky; and he fell upon the towers of Thangorodrim, and they were broken in his ruin": a poetic description of a mighty meteorite tumbling to the earth and destroying the landscape in the creation of the resulting crater⁷.

One additional explicit reference to meteorites can be found in the legendarium in *The Return of the King*, in the description of the mysterious Stone of Erech. The object is first mentioned in Aragorn's history lesson on the Paths of the Dead. According to common lore, it was upon that black stone that the "Kings of the Mountains swore allegiance" to Isildur, an oath that was broken, resulting in Isildur's cursing the men to never rest until fulfilling their oath. According

to the prediction of Malbeth the Seer, at the appointed hour the now-dead oathbreakers would once more stand before the stone and finally make good on their promise to fight for the house of Isildur¹². Aragorn further describes it as a black stone that was set up on a hill, and that it "was brought, it was said, from Númenor by Isildur"¹². When Aragorn

arrived at the appointed place with the Army of the Dead, it is described¹² as a "black stone, round as a great globe, the height of a man, though its half was buried in the ground. Unearthly it looked, as though it had fallen from the sky, as some believed; but those who remembered still the lore of Westernesse told that it had been brought out of the ruin of Númenor and there set by Isildur at his landing. None of the people of the valley dared to approach it, nor would they dwell near; for they said that it was a trysting place of the Shadow-men." Taken at face value, this passage seems to suggest that although the stone appears to be a meteorite, it has a more mundane (albeit equally symbolic) origin, as one of the few remaining artefacts of the doomed island to have been brought into Middle-earth by the sons of Elendil. If this is true, then if the stone were brought into the astronomy department of a local university in these times it might be referred to as a misidentified meteorite, or a 'meteorwrong'. However, one of the central lessons of the *History of Middle-earth* volumes is that very few of the details of the

published canon are written in stone (pun intended), and that many aspects of the tales have changed in the retelling and retooling. It is possible that the true origin and identity of the Stone of Erech is more astronomical than geological, and that in leaving the door open for such an alternate interpretation, Tolkien has once more mirrored a mystery of Middle-earth on a similar such conundrum in our own history — the famous Black Stone of the Ka'aba.

Stones from the sky

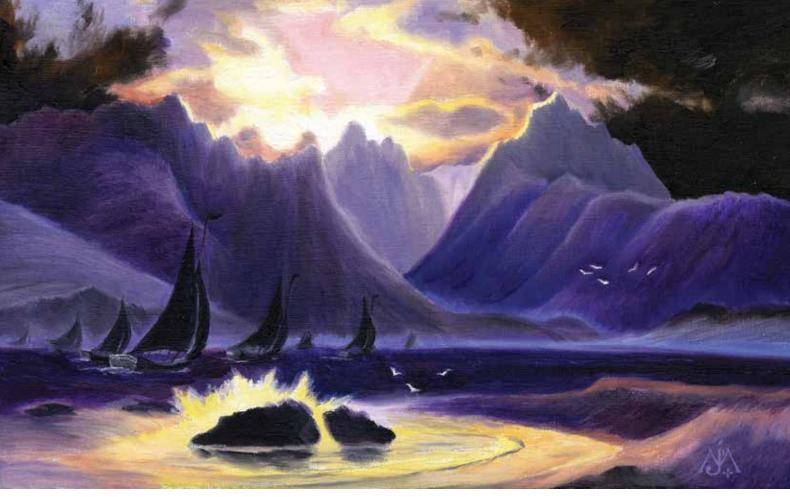
Throughout history, stones that have been observed to fall from the sky have been the source of wonder, fear and many times open worship $^{13,14}\!.$ The Needle of Cybele was a brown, conical stone that was worshipped in Rome as an image of the goddess. It is said to have fallen from the sky in an earlier time on the border between Phrygia and Galatia¹⁵. Fragments of the iron meteorite that created the 'Meteor Crater' in Arizona were treated as sacred objects by Native American tribes in the area¹⁶. An observed meteorite fall during a pagan festival in the Sirente Mountains of Central Italy some 16 centuries ago led to the hasty conversion of the local population to Christianity¹⁷. More recently, a meteorite seen to fall on 16 November 1492 was taken as a sign from heaven by Emperor Maximilian. A piece of the meteorite is still displayed in the town hall of Ensisheim, Germany, where according to legend it is said to be the transformed body of a local town official who had been thus punished for his cruelty^{15,18}. In the eighteenth century, separate meteorite falls in Japan and Siberia were venerated by local citizens, the

former as stones fallen from the Milky Way and used by the goddess Shokujo as weights for her loom, and the latter by Tartars as a holy artefact fallen from heaven 14,15.

The most sacred location in the Islamic faith is the Ka'aba of Mecca. This cubic granite structure, dressed in a fresh black embroidered cloth each year, not

only marks the direction of daily prayers, but is also the central point of the holy pilgrimage or hajj that each Muslim is required to complete at least once in their lifetime. Set in the eastern corner is the Black Stone, or *al-hajar al*aswad, which marks the beginning point of the seven-fold circumambulation of the structure that is part of the *hajj* ceremony. Those fortunate enough to walk close to the stone kiss or rub it, while others salute it as they pass by. Koranic tradition affords the stone a supernatural origin, although as is often the case of sacred texts there are multiple versions of the legend. In one tradition it was the body of Adam's guardian angel in Paradise, who had been turned to stone after Adam's exile to earth. The stone was brought by Adam to Mecca, where he built the first temple or Ka'aba, and the stone is thus considered a symbol of the original covenant between God and all Adam's descendents¹⁹. It is said by some that because of the stone's angelic origin, it will act as a witness for the faithful who have honoured it when the Day of Judgement arrives²⁰. After the destruction of the first Ka'aba

We should not ignore the obvious parallels between the Stone of Erech and Mecca's holy relic.



Black ships

Jef Murray

in the Noachian Flood, tradition states that it was rebuilt by Abraham and his son Ishmael. The site of the original temple was revealed to them by the "Divine Peace", who appeared as a dragon-shaped cloud 19. It is here that we find two further alternate origins for the stone. According to some scholars, the stone was found by the patriarch when searching for suitable building stones on the hill of Abū Qubays, whereas other traditions state that the Archangel Gabriel revealed the stone to Abraham. It is said to have originally had a white colour, but became black due to the sins of humankind or the touch of sinners¹⁹. Abraham's temple was subsequently destroyed, and the Prophet Mohammed set the stone into the corner of the current temple and began the tradition of the *hajj* as it is now known. The stone has had an unfortunate history since that time, having been broken by fire, kidnapped by heretical sects, and smashed by an invading soldier. Each time the pieces were reset into the Ka'aba with cement or resin of some kind and held in place with a silver collar. In its current state, the initial size of the stone cannot be determined, as only eight bonded pieces, the largest the size of a date, and totalling a surface area of 320 square centimetres, can be seen²¹.

The geological nature of the stone has been a source of debate, compounded by the fact that as a holy relic it has (understandably) not been subjected to laboratory testing. As a result of the many traditional accounts that connect its origin to 'heaven', many authors from the early nineteenth century to the present have presumed an astronomical origin, namely a meteorite^{13,22}. For example, a 1900 review

of meteorite folklore confidently stated¹⁵: "There can be, however, little doubt that it is a meteorite. Not only did it according to tradition fall from heaven, but it is described by travelers as having a black color and basaltic character, qualities which correspond exactly to those of meteoric stones." However, based on eyewitness descriptions of the stone, as well as its response to handling in the past, geologists have largely ruled out a meteoritic origin for the stone. For example, it cannot be an iron meteorite, as it would have long-ago rusted and disintegrated due to constant touching, and in contrast to historical reports of the stone's ability to float, it would be dense enough to unequivocally sink²³. Based on its visual appearance and presumed hardness, Dietz and McHone posit that the stone is a terrestrial agate²⁴. A compromise hypothesis suggests that the stone is made of impactite glass, created by the melting and fusing of desert sand (and perhaps meteoritic debris) in the heat of a large meteorite impact. The Wabar meteorite craters, located approximately 1,100 kilometres from Mecca, would be a logical source for such a stone²¹.

Origins of the Stone of Erech

Just as the mundane origin of the Black Stone of the Ka'aba is debated by scholars, so can we engage in a similar (albeit completely theoretical) exercise with the Stone of Erech. As with many aspects of the legendarium, the characteristics of the Stone of Erech underwent significant revisions during the writing of the trilogy. For example, in draft C of Book V,

Chapter 2, later called 'The Passing of the Grey Company', we read²⁵ that "there are other Stones yet preserved in this ancient land. One is at Erech." Christopher Tolkien concludes that it was his father's original intent that the Stone of Erech be one of the *palantíri*²⁵. It is therefore clear that the suggestion of a meteoritic connection is a later addition to the storyline. For example, it is also absent in the draft outline to what became the chapter 'The Last Debate'. Here Tolkien wrote that the stone was "according to legend brought from Númenor" and a palantír was still located in the ruins of the tower²⁵. Later in this draft (and some revisions), Gimli recounts a similar origin of the Stone, as "old tales tell"25. No mention of it looking like to fell from heaven appears thus far. It is in a later revision that we finally hear of the stone looking "as if it had fallen from the sky", a revision that was retained in the published version of the trilogy²⁵.

This is not the first time that an object in the legendarium was afforded a meteoritic origin in a later revision. Anglachel, the sword of Túrin, became meteoritic only after a 1930 revision in *The Quenta*, a decade after the first version of the tale appears³. I have speculated elsewhere³ on possible reasons for Tolkien's addition of a meteoritic origin for the sword, concluding that a confluence of events circa 1930 (including a surge in public interest in and popular-level writings about meteorites and impact craters) may have sparked Tolkien's interest in adding references to meteorites in the legendarium. Given that Tolkien was revisiting The Silmarillion texts while completing the trilogy, it is not unreasonable to presume that upon rereading the story of Túrin, the importance of the folklore of meteorites returned to his mind, and including the possibility that the Stone of Erech might have (some say) fallen from the sky merely added to the mystique and 'otherworldliness' of the stone and the oath that bound the Army of the Dead.

But we should not ignore the obvious parallels between the Stone of Erech and Mecca's holy relic. Besides their black appearance, and suggestions that they might be meteorites, both stones serve as tangible and enduring signs of a solemn oath. At the battle with the Haradrim, Aragorn orders the Army of the Dead to fulfil their oath¹² with the call: "Now come! By the Black Stone I call you!" The Stone of the Ka'aba will likewise call the faithful in the final battle of Judgement Day. The appearance of the dragon-shaped cloud in one version of the Ka'aba's origin is also intriguing, as it reminds one of Tolkien's use of connections between meteorites and dragons (as described above). Some scholars have explained the tradition that the Stone of the Ka'aba is a meteorite as being a result of a simple misunderstanding of the word 'heaven'. A stone from heaven, in a religious sense, is not a rock from outer space, but a divine gift from beyond the natural world²⁴. One can argue that Númenor, while technically not one of the 'Blessed Lands', is certainly a divinely created island, a parallel to the Garden of Eden, and from which humans were banished upon their 'fall' (their vain attempt to invade the Blessed Lands and become immortal). Just as the Stone of the Ka'aba is said (in some versions) to have been brought out of Paradise by Adam, in The Silmarillion

we read that the Faithful (Elendil and his sons) saved "many treasures and great heirlooms of virtue and wonder" from the destruction of Númenor, "and of these the most renowned were the Seven Stones and the White Tree". No explicit mention is made of the Stone of Erech, therefore we are bereft of direct evidence that the Stone was indeed one of these heirlooms and not, as some say of both this stone and the relic of the Ka'aba, a rock that fell from the sky.

Did Tolkien draw upon the Black Stone of the Ka'aba as a model for the Stone of Erech? Given Tolkien's well-known use of astronomical allusions in his writings, and knowledge of myriad cultural, religious and mythological traditions, it is certainly not out of the realm of possibility. At the very least, the relic of Ka'aba may have consciously or unconsciously influenced his later usage of an alternate ('hearsay') meteoritic origin for the Stone of Erech. However, as with the origin of the Stone of Erech itself, this question may permanently remain entrenched in the realm of speculation.

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