History

Meteor Beliefs Project: Meteoric portents from Livy and Julius Obsequens

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An annotated catalogue of meteoric, meteoritic and possibly allied events, extracted from texts by Livy and Julius Obsequens, is presented, covering the period 671–17 BC. Brief biographical notes on both authors are given, with some discussion of ancient Roman beliefs about portents and prodigies.

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1 Introduction

Titus Livius, more commonly known modernly as Livy, was born in Patavia (modern Padua) in 59 BC, where he also died, in 17 AD. He was a well-educated philosopher and writer who spent much of his adult life in Rome, where he enjoyed a long, close friendship with the Emperor Augustus, dying only three years after the Emperor. His masterwork was his *Ab Urbe Condita*, 'From the Founding of the City'. This was a monumental history of Rome (**the** City) and its Empire from the legendary foundation of Rome by Aeneas (whom we have met several times previously during this Project), to the death of Drusus, and possibly the death of Quintilius Varus, in 9 BC. Aside from the fascinating history, Livy frequently recorded lists of portents, including the meteoric and possibly meteoritic events which we shall examine here.

Unfortunately, of the original 142 books, only about a quarter survive mostly intact — Books I–X and XXI–XLV. An 'Epitome' of the history, possibly compiled by Livy's son, is also lost, but various extracts and summaries of this summary have survived, to hint at what we lack. These are far from satisfactory however, as they have often been reworked through other lost versions before coming down to today.

From these secondary compendia, that of greatest interest to us here is the *Prodigiorum Liber*, 'Book of Prodigies', of Julius Obsequens. He gave a chronological series of portent lists from 190 to 12 BC (not entirely complete in the form we have it, sadly), extracted from Livy's work. In his original, it probably began in 249 BC. Obsequens is a wholly obscure character. His text has been suggested as dating to the 4th century AD, or a little before, and from his writings, he clearly believed in prodigies, thus cannot have been a Christian, but all other details about him are lacking.

The biographical notes above were largely taken from the Introductions to Foster (1919) and Schlesinger (1967).

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2 Portents and prodigies

We have already touched on meteoric portents and prodigies earlier in this series, for instance the spoof list of portents from 'Bored of the Rings' in (Gheorghe & McBeath, 2004), or the ancient portents mentioned in regard to meteorite worship (McBeath & Gheorghe, 2005). To give a better idea of what a complete list might historically have contained, the following example came from Livy XXX.II.9–13, for 203 BC (Moore, 1949, pp. 372–373):

'And new religious fears were aroused in men's minds by portents reported from a number of places. On the Capitol ravens were believed not only to have torn away gilding with their beaks but even to have eaten it. At Antium mice gnawed a golden wreath. The whole region around Capua was covered by an immense number of locusts, while there was no agreement as to whence they had come. At Reate a colt with five feet was foaled. At Anagnia there were at first shooting-stars at intervals and then a great meteor blazed out. At Frusino a halo encircled the sun with its slender circumference, and then the ring itself had a greater circle bright as the sun circumscribed about it. At Arpinum in an open meadow the earth settled into a huge depression. One of the consuls on sacrificing his first victim found the 'head' of the liver lacking. These prodigies were expiated by full-grown victims; the gods to whom the sacrifices should be offered were announced by the college of the pontiffs.'

Such a list seems to have been collected annually — or at least was announced so — as this was the typical way in which Livy presented them. As we can see, meteoric events formed only a small fraction of the whole, but things like aurorae or atmospheric halo effects were featured too, together with human and animal oddities. Animal sacrifices, as noted above, were the normal way to offset the ill-fortune portended by such occurrences. The liver's 'head' incidentally, was a notable protruberance on a variably-shaped organ. A large 'head' was considered very favourable, a small or misshapen one very unfavourable, while a liver with no 'head' was considered singularly disastrous.

Whether the ancient Romans really believed in these omens is open to debate. For instance, Livy XXVIII.XXVII.16 (op. cit., pp. 114–115) cited the following as part of a long speech by the military commander Publius Scipio at Sucro in Spain in 206 BC, after he

had quelled a mutiny among his troops begun while he was ill:

'Showers of stones and thunderbolts hurled from the sky and animals bringing forth strange offspring you reckon portents; here we have a portent which cannot be expiated by any victims, by any set days of prayer, without the blood of those who have dared so great a crime.'

The 'portent' and 'crime' Scipio referred to was of course the mutiny.

Other authors occasionally implied that such prodigies were treated rather like modern newspaper horoscopes - some people believed them, most were sceptically ambivalent, and some were entirely sceptical. Livy obviously felt the need to justify including them, perhaps in response to criticism of earlier volumes of his work, as in his discussion for 169 BC, he wrote (XLIII.XIII.1–2; (Schlesinger, 1951, pp. 44–45)):

'I am not unaware that, as a result of the same disregard that leads men generally to suppose nowadays that the gods foretell nothing, no portents at all are reported officially, or recorded in our histories. However, not only does my own mind, as I write of old-time matters, become in some way or other old-fashioned, but also a certain conscientious scruple keeps me from regarding what those very sagacious men of former times thought worthy of public concern as something unworthy to be reported in my history.'

We are thankful he did record such matters, since whatever the beliefs or supposed contemporary relevance attributed to them, they provide a reassuring insight that unusual events of similar character to today, were also present more than 2000 years ago.

Taking the portent-lists from Livy and Obsequens, we have extracted what we think to be the more likely meteoric and meteoritic candidates, or which indicated the beliefs people held about things that could fall from the sky, which we would modernly view in such a possible way. We present these in the chronological catalogue below, with annotations or explanations where necessary. The events selected were dated to between 672 and 17 BC, though most were recorded from 218 (when Livy's extant text resumed after a ten-book gap) to 87 BC.

In using this catalogue, it is important to have in mind the selection effects employed. Livy (and as a result, Obsequens) did not record everything in this regard. Not all years had portents listed for them, perhaps because Livy's sources were lacking them. Some lists were very substantially shorter than others, and Livy occasionally noted he had omitted prodigies he did not consider relevant or credible. These choices did not seem to have affected his recording of plausibly meteoric events, but we cannot be certain of this.

Then too, there is our selectivity in picking the items we have. Some 'meteors' or 'lights in the sky' seemed to be more auroral than modernly meteoric, and most of these we excluded. In doing so, it is possible we have omitted some which may have been more relevant than we realised, but we hope these would be very few. Conversely, we have included some events which may not seem especially meteoric, a few of which seem incapable of a modernly-scientific explanation as written. As usual within this Project, we are as interested in what people believed as what may be scientifically accurate, and we are reasonably convinced there may be meteoric events behind the vast majority of those we have given, however garbled the accounts may seem.

3 Catalogue of events

For each entry in this catalogue, we have given the date, the relevant place, details of what occurred (including quotations from the text), the source reference, and any additional comments of ours. For the few items featured jointly by Livy and Obsequens, we have given information on variations between the sources, since this helps give a rough idea of Obsequens' general accuracy. Figure 1 provides a map to help with orientation.

Regarding the dating of events, Livy used a system of 'A.U.C' ('Ab Urbe Condita') dates, from the legendary founding of Rome, from which base his modern editors have generated dates BC. However, as the ancient Roman year began and ended in March, there is an uncertainty as to which year by the modern calendar a given prodigy occurred in, particularly as there is only the assumption they were from just the year immediately passed. Regrettably, no better dating than this can be achieved.

672–640 BC: On Mount Alban, '...it was reported to the king and senators that there had been a rain of stones' ... 'As this could scarce be credited, envoys were dispatched to examine the prodigy, and in their sight there fell from the sky, like hail-stones which the wind piles in drifts upon the ground, a shower of pebbles. They thought too that they heard a mighty voice issuing from the grove on the mountain-top...' This voice commanded the Albans to celebrate the sacrifices their forefathers had made, which they had either forgotten, or abandoned in favour of the Roman rites. 'The Romans also, in consequence of the same portent, undertook an official nine days' celebration', either commanded by the mysterious voice from the mountain, or on the advice of the soothsayers. 'At all events, it remained a regular custom that whenever the same prodigy was reported there should be a nine days' observance.'

'Not very long after this Rome was afflicted with a pestilence.' When King Tullus Hostilius, legendary third king of Rome, contracted the illness, he became obsessed by superstitions and religious observances. In performing one of these rites in secret, the ceremony was incorrectly done, so it was said, as no divine guidance was sent to the king, who in fact, 'was struck by a thunderbolt and consumed in the flames of his house.' Livy I.XXXI.1–8 (Foster, 1919, pp. 110–113).

We have provided so much detail from this report, as it was a particularly important one, giving more discussion of the 'fall of stones' than most of the rest. It also stressed the importance of the nine days of rites, which was frequently prescribed subsequently, as Livy noted. Whether the stones were meteoritic, meteorological, or geological, is unknown. This instance suggested

Figure 1 – A sketch-map of central Italy showing the named ancient towns and the city of Rome (filled circles), mountains (triangular symbols), regions (bounded by dashed lines and identified using capital letters), or tribal areas (in italics; the caption or shaded area approximately defines the area they were most active in), mentioned in the catalogue entries or otherwise relevant to this article. Sources included maps in the various Livy translations referred to below, plus (Treharne & Fullard, 1963, pp. 10–13) and (Scarre, 1991, pp. 168 and 172–173).

a meteorological explanation was unlikely here, given the clear negative comparison with normal hailstones, though other later stone-falls were not so straightforward. If hailstones, they may have been unusually large, as can rarely happen in a severe storm. A volcanic explanation was unlikely for Mount Alban, ~ 160 km from the nearest known major volcano, Vesuvius. A shower of stones thrown by an unseen group on the mountain might be a more possible origin, especially given the political agenda of the 'mighty voice'. Stones were thrown as weapons by the Roman army, often ones rounded for the purpose, and Roman military annals did mention thrown weapons of various kinds — darts, longer spears, arrows, stones or sling-shots — falling in showers.

Whatever the case, the two events recorded in this instance, including one perfectly-timed for the arrival of witnesses, suggested a meteoritic solution for both would be highly unlikely. The belief that stones could fall from the sky in showers, and the powerful effect this might have on witnesses and those to whom the event was reported, was certainly well demonstrated, so much so that an entirely new method of expiation for this one specific class of event only, which continued for centuries afterwards, was generated as a result. The dates were those traditionally assigned to the reign of King Tullus, incidentally.

345–343 BC: On the Capitoline Hill, Rome. The dedication of the Temple to Juno Moneta 'was immediately followed by a prodigy like the one which had happened long before on the Alban Mount; for a shower of stones fell, and a curtain of night seemed to stretch across the sky'. The Sibylline Books were consulted, and sacrifices performed to avert these prodigies by the Romans and the people in the country round about. Livy VII.XXVIII.6–8 (Foster, 1924, pp. 452–455).

The shower and 'curtain of night' might suggest a stormy explanation as most plausible, with heavy, dark clouds, but the 'curtain' effect might also have been the dark dust trail from a meteoritic fireball, which may perhaps explain what the 'seemed to stretch across the sky' comment was trying to encapsulate. Oddly, no nine-day observance afterwards was mentioned, despite the explicit link with the original stone-fall on Mount Alban.

295 BC: Many places. Showers of earth fell, in a year with both a pestilence and a successful war. Livy X.XXXI.8 (Foster, 1926, pp. 478–479). If we allow that some ancient falls of stones might be meteoritic, then earth-falls, where 'earth' meant simply finely-powdered

rock, could also be connected, albeit perhaps rather less likely.

218 BC: In the country of the Picentes. A shower of pebbles fell, for which a nine-day sacrifice was proclaimed. Livy XXI.LXII.5–6 (Foster, 1929, pp. 184–187).

217 BC: At Praeneste, 'glowing stones had fallen from the sky'. At Arpi, 'bucklers had appeared in the sky and the sun had seemed to be fighting with the moon'. Livy XXII.I.9–10 (op. cit., pp. 200–201). No nine-day rite was held for the fall of the glowing stones. A 'buckler' was a small, round shield, and some descriptions suggested this was used as a term for a very bright meteor on occasion. The odd context here may indicate a halo explanation, however. These two portents were part of a very long list in Livy XXII.I.8–13, with an equally long list of expiations in lines 14–20.

216 BC: On the Aventine Hill, Rome, and at Aricia, showers of stones were reported, at about the same time. Livy XXII.XXXVI.7 (op. cit., pp. 320–321). Possibly from a single meteorite shower?

215 BC: At the Temple of Juno Sospita, Lanuvium, 'images of the gods dripped blood, and it rained stones around the temple - a shower on account of which there were ceremonies, as usual, for nine days.' Livy XXIII. XXXI.15 (Moore, 1940, pp. 108–109).

214 BC: At Cales, a rain of chalk was reported. Livy XXIV.X.7 (op. cit., pp. 206–207). Chalk might be any other light coloured stone, even if the report was apparently too geologically-specific to be meteoritic.

212 BC: 'There were terrible storms; on the Alban Mount it rained stones steadily for two days.' ... 'At Reate a huge stone seemed to fly', while the Sun there seemed an unusually blood-red colour. Livy XXV.VII. 7–8 (op. cit., pp. 364–365). The stone-rain was most plausibly meteorological here. A nine-days' observance was held afterwards. The Reate flying stone was unique in Livy.

211 BC: At Eretum, a shower of stones was reported, followed by a nine-days' observance. Livy XXVI.XXIII. 5–6 (Moore, 1950, pp. 88–91).

207 BC: At Veii, and in the Armilustrum on the Aventine Hill at Rome, rains of stones were reported, expiated by two nine-day ceremonies. Livy XXVII.XXXVII. 1 & 4 (op. cit., pp. 356–359).

205 BC: Frequent showers of stones were reported from unstated locations, prompting the transfer of the Magna Mater stone from Pessinus in Phrygia to Rome. Livy XXIX.X.4–5 (Moore, 1949, pp. 244–245). We discussed these events in relation to the Magna Mater stone previously (McBeath & Gheorghe, 2005).

204 BC: At Setia, a meteor was seen 'shooting from east to west'. At an unstated location, a shower of stones was reported, following which nine days of rites were observed. Livy XXIX.XIV.2–4 (Moore, 1949, pp. 256–259).

203 BC: As cited in Section 2 above, shooting stars followed by a great meteor were seen at Anagnia. Livy XXX.II.11.

202 BC: 'At Cumae the sun was partially eclipsed and it rained stones'. On the Palatine Hill in Rome, there was also a shower of stones, after which a nine-day ceremony was held. Livy XXX.XXXVIII.8–9 (op. cit., pp. 510–511).

194 BC: At Rome, several showers of earth were reported, plus a shower of stones in the Hadriani country (location unknown). Livy XXXIV.XLV.6–8 (Sage, 1936a, pp. 534–535).

193 BC: Showers of stones were reported at Aricia, Lanuvium and on the Aventine Hill in Rome. A single nine-day sacrifice was performed as a result. Livy XXXV.IX.4–5 (Sage, 1935, pp. 24–25).

192 BC: At Amiternum, there was a shower of earth. Livy XXXV.XXI.4 (op. cit., pp. 60–61).

191 BC: At Tarracina and Amiternum several showers of stones were reported. Livy XXXVI.XXXVII.3 (op. cit., pp. 262–263). A nine-day festival to expiate these showers was held. In the same year, the new Temple to the Magna Mater was dedicated on the Palatine Hill in Rome.

190 BC: Near Tusculum, the people reported a shower of earth. Livy XXXVII.III.3 (op. cit., pp. 298–299). This featured in the first report in Obsequens too, although he had the shower fall *at* Tusculum, not simply nearby. Obsequens 1 (Schlesinger, 1967, pp. 238–239).

188 BC: On the Aventine Hill at Rome, it was said there had been a shower of stones, following which a nine-day sacrifice was held. This was recorded after the report of an eclipse, modernly dated to 188 BC July 17. Livy XXXVIII.XXXVI.4 (Sage, 1936b, pp. 118–119). Obsequens 2 pluralized the shower (Schlesinger, 1967, loc. cit.).

186 BC: '...a nine-day feast took place because in Picenum through three days there had been showers of stones, and especially because flames shining in the sky in many places were said to have set fire to the garments of many when a light breeze blew upon them.' Livy XXXIX.XXII.3 (Sage, 1936b, pp. 280–281). The description might suggest severe hail storms with much lightning. This was reinforced by Obsequens 3 (Schlesinger, 1967, pp. 238–241), who mentioned just a single stone-shower, but also that lightning bolts in many places had lightly scorched people's clothing. However, very rare reports from other, somewhat later, sources mentioned 'flames in the sky' in association with severe earthquakes, possibly due to burning material cast into the air during such an event, and although apparently unlikely, we should not ignore the possibility that this may have been a garbled account of strong meteor activity, or maybe an aurora, perhaps associated with an exaggerated meteorite shower report.

177 BC: '...a stone fell from the sky into the grove of Mars in the territory of Crustumerium'. Livy XLI.IX.5 (Sage & Schlesinger, 1938, pp. 210–211). No nine-day observance was recorded for this, most plausibly meteoritic, event.

176 BC: '...at Tusculum, a firebrand was seen in the sky'. Livy XLI.XVI.6 (op. cit., pp. 232–233). A probable bright meteor report, similar to the next entry.

174 BC: At Rome, 'a rainbow by day in a clear sky was seen extending over the temple of Saturn in the Forum Romanum, and three suns shone at once, and

that same night numerous firebrands glided through the sky'. Livy XLI.XXI.12–13 (op. cit., pp. 254–255). An interesting day of bright haloes and a night of strong meteor activity, much as might appeal to many IMO members today, we felt.

173 BC: Near Veii (called by its alternate name of Remens in the text), a shower of stones was reported. Livy XLII.II.4 (op. cit., pp. 296–297). No nine-day observance was mentioned.

172 BC: At Auximum, it was reported that a shower of earth had fallen. Livy XLII.XX.6 (op. cit., pp. 348–349).

169 BC: At Anagnia, a fiery meteor was seen in the sky. At Reate, a rain of stones was reported. Livy XLIII.XIII.3–4 (Schlesinger, 1951, pp. 44–47). Near the end of the year, two showers of stones were reported, one near Rome, the other near Veii, and for both, separate nine-day rites were carried out (though apparently not for that at Reate earlier). Livy XLIV.XVIII.6 (op. cit., pp. 148–149). The late-year Veii and Roman events might have been parts of a single meteorite shower.

167 BC: At Anagnia, a rain of earth was reported. At Lanuvium, a meteor was seen in the sky. Livy XLV.XVI.5 (op. cit., pp. 296–297). Obsequens 11 (Schlesinger, 1967, pp. 244–245) called the Lanuvium event 'a blazing meteor' (*fax ardens* in the Latin text).

166 BC: At many places in Campania there was a shower of earth. At Lanuvium, a meteor was seen in the night sky. Obsequens 12 (op. cit., pp. 244–247).

163 BC: 'In Cephallenia a trumpet seemed to sound from the sky. There was a rain of earth.' Obsequens 14 (op. cit., pp. 248–249). 'Cephallenia' was probably modern Cephalonia, one of the islands west of the Greek mainland. The rain of earth probably did not occur there too, judging by other entries in Obsequens. The sound in the sky might have been due to a large meteoric event.

154 BC: 'At Compsa weapons appeared to fly through the sky.' Obsequens 17 (op. cit., pp. 250–251). Similar descriptions sometimes seemed to refer elsewhere to meteors.

152 BC: At Aricia, a rain of stones was reported. A single day of prayer was performed because of it. Obsequens 18 (op. cit., pp. 252–253). Curiously, not the usual nine-day ritual.

140 BC: 'At Praeneste and in Cephallenia it seemed that images had fallen from the sky.' Obsequens 23 (op. cit., pp. 254–255). Cephallenia was again presumably the same Greek island as mentioned in Obsequens 14, for 163 BC above. Perhaps meteoritic, or due to unusually shaped hail, or an aurora?

137 BC: 'At Praeneste a blazing meteor appeared in the sky, and there was thunder from cloudless heavens.' Obsequens 24 (op. cit., pp. 256–257). While tempting to assume the two events were related, this need not have been the case.

133 BC: At Ardea, a rain of earth was reported. Obsequens 27a (op. cit., pp. 260–261).

125 BC: 'At Arpi there was a rain of stones for three days...' Obsequens 30 (op. cit., pp. 264–265). The lacuna in the text immediately after this item was unfortunate, as it might have shed more light on a, possibly meteorological, event.

108 BC: At Rome, a firebird and an owl were seen. Obsequens 40 (op. cit., pp. 272–273). We have included this item, as some modern commentators have suggested 'firebird' (Latin *avis incendiaris*) might have been a euphemism for 'meteor'. Pliny (*Natural History* X.XVI.36; (Rackham, 1983, pp. 314–315)) discussed the firebird, but gave 107 BC as the year it and an eagle-owl appeared at Rome, necessitating the city's ritual purification. Pliny noted the bird as one of ill-omen, but he continued, 'What this bird was I cannot discover, and it is not recorded.' He reported the opinions of others that it might have been any bird seen taking a coal from a fire-altar, or it might have been a 'spinturnix', but no one could say what such a name meant or referred to. Overall, Pliny's commentary did not support a meteoric view, but we should perhaps not dismiss the possibility entirely.

106 BC: At an unspecified location, 'An uproar in the sky was heard, and javelins seemed to fall from heaven.' At Rome, a meteor was seen flying over in daylight. Obsequens 41 (Schlesinger, 1967, pp. 272–274). Meteors and comets were sometimes described as weapons of various kinds, but whether this was what 'javelins' here meant is unknown. Perhaps a large, fragmenting fireball, through to something entirely non-meteoric?

104 BC: At an unstated place, 'Weapons in the sky seemed to join in battle at both times of day from east and west; those from the west appeared to suffer defeat.' The soothsayers advised this portent be averted by a collection of gifts, brought by twenty-seven maidens to the goddesses Ceres and Proserpina. Obsequens 43 (op. cit., pp. 274–277). This event might have been meteoric, or auroral, or something else entirely. As the modern footnotes identified, the odd 'both times of day' phrasing might have meant 'by day and night' or 'night and morning'. The number of virgins had great mystical significance, being 3^3, while the two goddesses were both associated with the cyclical growth of agricultural crops.

102 BC: In Etruria, a rain of stones was reported, and a nine-day ceremony was held afterwards to purify the city: 'The ashes of the victims were scattered in the sea by the Board of Ten, and for nine days a procession of suppliants was led by magistrates about all the temples and the outlying towns.' Obsequens 44 (op. cit., pp. 276–277). An interesting, rare, sketch of one of the nine-day ceremonies. The 'victims' were animals sacrificed to one or other deity, and burnt, while the 'Board of Ten', or *decemviri*, was the college of Roman priests who guarded and consulted the Sibylline Books, as we described in (McBeath & Gheorghe, 2005). It is interesting too that although the portent occurred in Etruria, it was necessary to ritually cleanse the city of Rome and its nearby towns.

101 BC: In Rome: 'The sacred shields rattled and moved of their own accord. A slave of Quintus Servilius Caepio emasculated himself in devotion to the Great Mother, and was shipped across the sea, that he might never return to Rome. The city was purified.' Obse-

quens 44a (Schlesinger, 1967, pp. 278–279). While not meteoric directly, we have included these two items as they provided some follow-up to items we discussed previously, in (McBeath & Gheorghe, 2005): the ancilia, based on the original sky-fallen sacred shield, the Ancile; and the potentially meteoritic stone of the Magna Mater, or Great Mother.

100 BC: 'A blazing meteor was seen far and wide at Tarquinii, falling in a sudden plunge. At sunset a circular object like a shield was seen to sweep across from west to east.' Obsequens 45 (Schlesinger, 1967, pp. 278–281). 'Shield' was sometimes used to describe apparently very bright meteoric objects elsewhere. The location of this event was not stated.

98 BC: At Rome, 'During a festival it rained white chalk in the theatre; this foretold good crops and good weather. There was thunder from a clear sky.' Obsequens 47 (op. cit., pp. 282–283). Theatres were open to the sky in Roman times. Whether the chalk-fall and the thunder were related is unknown.

94 BC: Among the Volsci, a rain of stones was reported. A nine-day ceremony was held as a result. Elsewhere, a firebird was seen and killed. Among the Vestini, stones rained down inside a villa. Somewhere else, a meteor was seen, 'and the whole sky appeared to be on fire.' Obsequens 51 (op. cit., pp. 286–287). The firebird here seemed decidedly non-meteoric, while the lone 'meteor' might have been used in its earlier sense of anything in the sky, with the event actually an auroral display.

93 BC: A nine-day ceremony was mentioned at an unspecified place, but no fall of stones was listed. 'At Volsinii flame was seen to flash from the sky at dawn; after it had gathered together, the flame displayed a dark grey opening, and the sky seemed to divide; in the gap tongues of flame appeared.' Obsequens 52 (op. cit., pp. 288–289). While the Volsinii event at first resembled a meteor's description, the rest was much more auroral in character.

92 BC: A meteor was reported in the sky at an unstated place. Obsequens 53 (loc. cit.).

91 BC: Probably at Rome, 'About sunrise a ball of fire flashed forth from the northern heavens with a great noise in the sky.' ... 'Among the Vestini there was a rain of stones and sherds for seven days.' No nine-day ritual was reported. 'Near Spoletium a gold-coloured fireball rolled down to the ground; increased in size, it seemed to move off the ground towards the east, and was big enough to blot out the sun.' Obsequens 54 (op. cit., pp. 290–291). The Spoletium event was probably ball-lightning, although it may have been a garbled version of a meteoric fireball instead. The seven-day stone-and-sherd rain, if not simply an exaggeration, would have been a most unlikely meteoritic happening. It might be that the usual nine-day rites were shifted in an abbreviated form to the duration of the event in error.

88 BC: 'From cloudless air and a wide expanse of clear sky, the blast of a trumpet was heard, uttering a shrill and lamentable sound. Those who heard it were one and all beside themselves with fear. But the Etruscan soothsayers pronounced that the portent indicated a change of the race and a new era.' Livy, fragment 15a from Book LXXVII (op. cit., pp. 184–187). This was not repeated by Obsequens. No location for it was stated, but it was associated with the outbreak of the Roman civil war, so was most likely at Rome. Obsequens instead reported that in this year at 'stratopedon' (an unknown place(?)-name, but probably from the island of Rhodes, off south-west modern Turkey), 'a huge star fell from the sky.' Obsequens 56 (op. cit., pp. 292–295).

87 BC: During the civil war, at Rome, 'the sky seemed to fall' on the camp of Gnaeus Pompeius, and he himself 'perished by the blast of a heavenly body.' Obsequens 56a (op. cit., pp. 294–295). While floridly vague here, other authors suggested the camp and Pompeius were struck by lightning.

44 BC: At an unstated site, a meteor was seen to travel westwards in the sky. Obsequens 68 (op. cit., pp. 308–313). This reference included a long list of the portents recorded following Caesar's death, including the famous comet said to have been Caesar's soul ascending to heaven by some (see for instance (Gheorghe & McBeath, 2003)). Obsequens said only that the comet was dedicated to the deified Julius.

43 BC: At an unspecified location, 'A vision of armour and weapons seemed to rise with a crash from earth to heaven.' Obsequens 69 (Schlesinger, 1967, pp. 312–313). But for the sound, more like the description of a potential aurora, although meteors as weapons might have been an alternative possibility.

17 BC: At an unnoted site, 'A meteor reaching from south to north made night as bright as the light of day.' Obsequens 71 (op. cit., pp. 318–319).

4 Conclusion

The reports of events presented here from Livy and Obsequens were not always readily identifiable, and their number is difficult to visualise spatially and temporally. Consequently, a follow-up article will give an analysis to assist in this, with some further discussion.

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