

Capron and the crop circles

MARINUS ANTHONY VAN DER SLUIJS examines some early scientific reports of strange formations in cornfields.



MARINUS VAN DER SLUIJS is a historical linguist, researching archaeoastronomy and mythology. He was once struck by lightning and while he has never seen a ghost he is dying to see one.

Back in the 1980s, when the crop circle phenomenon was widely considered a novelty, natural explanations still carried some clout. The British physicist and meteorologist, Dr Terence Meaden, notably fingered a species of electrified whirlwind dubbed a 'plasma vortex' as the most likely agent responsible for crop formations. By now, the increasing complexity of the patterns and the disclosure of the identities of many of the 'hoaxers' – or perhaps we should say 'ostenders' – render such thought experiments hopelessly dated. Or do they?

As crop circles have turned into an artistic genre of their own, the little evidence for a genuine atmospheric cause has simply been drowned out, or so it seems. Yet as rare phenomena are every bit as real as common ones, it is worth rescuing this wheat from the chaff of cases due to human intervention. Searches for records of crop circles antedating 1980 or occurring outside the Western world – recently joined by Russia, Japan and India – have ended in a sonorous silence, with the single exception of the renowned woodcut pamphlet of the 'Mowing Devil' published in 1678, which sees the Devil constructing a perfect oval in the field of a farmer who refused to mow it himself (FT264:30–31). While even this potential testimony has been discounted by many a sceptic, the devil is in the additional details, overlooked in most modern treatments of the subject.

In July 1880, the English solicitor and amateur astronomer and spectroscopist John Rand Capron (1829–1888) published a letter in *Nature* reporting on an unprecedented disturbance of fields in the vicinity of Guildford, Surrey. For its historical value, it is worth repeating the piece in full:

"The storms about this part of Surrey have been lately local and violent, and the effects produced in some instances curious. Visiting a neighbour's farm on Wednesday evening (21st), we found a field of standing wheat considerably knocked about, not as

Crop circles have turned into their own artistic genre

*an entirety, but in patches forming, as viewed from a distance, circular spots. Examined more closely, these all presented much the same character, viz., a few standing stalks as a centre, some prostrate stalks with their heads arranged pretty evenly in a direction forming a circle round the centre, and outside these a circular wall of stalks which had not suffered. I send a sketch made on the spot, giving an idea of the most perfect of these patches. The soil is a sandy loam upon the greensand, and the crop is vigorous, with strong stems, and I could not trace locally any circumstances accounting for the peculiar forms of the patches in the field, nor indicating whether it was wind or rain, or both combined, which had caused them, beyond the general evidence everywhere of heavy rainfall. They were to me suggestive of some cyclonic wind action, and may perhaps have been noticed elsewhere by some of your readers."*¹

The description of these scattered circles sounds like a genuine precursor to modern crop formations, occurring in the proper 'crop circle season'. Capron's hopes for corroboration from other readers may have been squashed, but his report was not entirely forgotten. Whereas violent storms may have had little to do with the event, Capron's hunch that "some cyclonic wind action" could have been the culprit may well have planted the seeds for the plasma-vortical theory in Meaden's inquisitive mind. And as recently as June 2010, a prominent scientist harked back to Capron's note in another article in *Nature*, albeit dismissively. Richard Taylor, a professor of physics, psychology and art at the University of Oregon, recognised Capron's contribution as the "first formal scientific comment on crop circles", yet



ABOVE: In 1880, John Rand Capron described disturbances of field crops in Surrey which suggest an early example of crop circle-like effects.

FACING PAGE: Ball Lightning – "Globe of Fire Descending into a Room" in Dr G Hartwig: *The Aerial World*, London, 1886, p267. Library Call Number QC863.4 H33 1886.

went on to offer the human art of crop-circle making, pioneered by Douglas Bower and David Chorley, as "a simpler explanation".² Fair enough, but Taylor's failure to account for Capron's evidence borders on intellectual lassitude. Is the idea that Capron's circular patches were the result of a 19th-century hoaxer? This is *a priori* unlikely, as hoaxers generally have a point to make in a specific socio-cultural context – the 'Pitdown Man', for instance, was put together at a time when the origin of modern man remained hotly disputed. If Capron witnessed a fabrication, it would have been one utterly meaningless to its intended audience. On the other hand, if hoaxers take their cue from veritable phenomena, a process referred to as 'ostension', the likes of Bower and Chorley could have seized upon the rare appearance of natural formations in the crops to substantiate the idea that extraterrestrials visit the planet or to "drive the emerging organic movement".³

At any rate, Capron's credentials were impeccable. A regular correspondent to the science journals of his time, he penned three monographs on scientific issues as diverse as photographic spectra, rainbands and auroræ. One of his lasting contributions to science was his demonstration that magnetic forces control the forms, motions and probably even the spectrum of the northern lights. Writing in 2000, Peter van Doorn, director of the Ball Lightning Division of the Tornado and Storm Research Organisation (TORRO), based in Shoreham-by-Sea, West Sussex, opined: "There can be no doubt that he was a strictly objective witness and his report must be regarded as reliable evidence. Notice that he enclosed a sketch of the 'most perfect' of the circles, which the journal, unfortunately, did not publish [...]. In other words, this could be a good 19th-century case of crop circles formed by electromechanical vortical effects. [...] It independently confirms the fundamental character of the simple crop circles which were investigated in the late 1970s and the 1980s also in Southern England."⁴

It is worth scouring the annals of science for other early cases. Though this came too late for Capron, van Doorn

drew attention to a second case again reported by an anonymous namer in a notable scientific journal, *New Scientist*, 8 August 1970. Moore described "circular depressions in wheat fields at the site of the famous 'Circles in Wiltshire'",⁵ a full decade before pranksters Bower and Chorley stepped forward.

Meagre though this case may seem to sweep aside and the scientific community to 'saving' these phenomena. For all its ingenuity, the explanation Meaden's magnetohydrodynamic theory is rather thin on the ground. More promising is van Doorn's ignored suggestion that ball lightning bolides or ball lightning strikes of sufficient force in fields could be used to carve out rings, dots or lines. The bursting of such a 'flash' of energetic 'darts' would be "in various directions but with a vortical motion".⁶ This mechanism, van Doorn called an 'invasion' of the City of London, a number of fiery bodies were seen in 1794, provoked by "one of the most and tremendous" thunderstorms in living memory and produced a disaster matched by few others today. At a pub called Temple Bar, a "flash [...] descended in an immense ball of fire east of Temple bar, it was of great velocity, and struck with immense force. Fortunately rain had driven every person from the street, and no coach was present. The first effect observed was produced by an explosion of every particle of straw and the water, was completely destroyed, and the doors of the houses, particularly on the street, were shaken and driven open."⁷ Would such an orb have produced a crop circle if it descended in a field?

Van Doorn placed his theory in what he called a "connection" between 'ball lightning' and certain vortical phenomena. The examples he cited to support his theory are ambiguous at best. "tornadic phantasmagoria" with its concomitant 'wheels' almost certainly refer to a display of the aurora borealis, a bolide.⁸ And the 'orb' mentioned in a handwritten source, was indeed a ball lightning or "twisted like a coil" as Pliny,¹⁰ but was characterized as a globe with thin

drew attention to a second instance, again reported by an amateur astronomer in a notable science journal: in *New Scientist*, 8 August 1963, (Sir) Patrick Moore described “circular and elliptical depressions in wheat fields adjoining the site of the famous ‘Charlton Crater’ in Wiltshire”,⁵ a full decade and a half before pranksters Bower and Chorley stepped forward.

Meagre though this cull is, it is hard to sweep aside and the search for a transient atmospheric force capable of ‘saving’ these phenomena is still on. For all its ingenuity, the evidence for Meaden’s magnetohydrodynamic vortices is rather thin on the ground. Much more promising is van Doorn’s seemingly ignored suggestion that exploding bolides or ball lightning (right) can exert sufficient force in fields and meadows to carve out rings, dots and lines; after the bursting of such a ‘fireball’, “a series of energetic ‘darts’” would shoot out “in various directions before earthing with a vortical motion”.⁶ In support of this mechanism, van Doorn adduced an ‘invasion’ of the City of London by a number of fiery bodies on 7 August 1794, provoked by “one of the most awful and tremendous” thunderstorms within living memory and producing a scene of disaster matched by few suicide-bombers today. At a pub called The Cock at Temple Bar, a “flash [...] was seen to come down in an immense body, a few yards east of Temple bar, it wheeled about with great velocity, and struck the street with immense force. Fortunately, the heavy rain had driven every person from the street, and no coach was passing. The first effect observed was similar to that produced by an explosion of gunpowder; every particle of straw, mud, and even the water, was completely swept from the street, and the doors and windows of the houses, particularly on the north side of the street, were shaken – some of them driven open.”⁷ Would the same plasma orb have produced a crop formation had it descended in a field?

Van Doorn placed much confidence in what he called a “definite nexus between ‘ball lightning’ phenomena and certain vortical phenomena”.⁸ The few examples he cited to bolster that claim are ambiguous at best, however. The “tornadic phantasm viewed by Ezekiel, with its concomitant plasmic globes and ‘wheels’” almost certainly described a display of the *aurora borealis* rather than a bolide.⁹ And the ‘comet of Typhon’, mentioned in a handful of classical sources, was indeed *spirae modo intorta* or “twisted like a coil” according to Pliny,¹⁰ but was characterised by others as a globe with thin hair attached¹¹



TOP PHOTO / FORTEAN PICTURE LIBRARY / SUFOI / HENRIK KLINGE PEDERSEN

or as sickle-shaped.¹² Van Doorn might be pleased to learn that a late astrologer held the appearance of this body responsible for “the destruction of crops and kings in the East and West”,¹³ but there is no argument that at least the later authorities regarded Typhon as a comet following the same direction as the Sun, not a bolide. Although nothing in the prosopography of this Typhon flies in the face of a cometary interpretation, it is worth entertaining the possibility that the original Egyptian observation sprang from an encounter with a bolide or indeed an auroral ray, known to be vortical in composition. But whatever the conclusion, none of this sheds much light on the crop circle enigma. Crop circle literature itself almost certainly yields a much greater harvest of indications for a relation with ball lightning, but of course it does not help that ball lightning, too, continues to baffle scientists (FT163:32–35; 242:44–47; 246:14, 44–47; 249:14). For now, perhaps, a mere consensus that crop circles *can* be natural would mark an important stride forward. With apologies for the corny turn-of-phrase, it is hoped that other early eye-witness accounts will continue to crop up. **FT**

NOTES

- 1 R Capron: “Storm Effects”, *Nature*, 22, 561, 29 July 1880, 290–291.
- 2 R Taylor: “The Crop Circle Evolves”, *Nature*, 465, 10 June 2010, 693.
- 3 [*ibid.*]
- 4 P van Doorn: “A Case of Genuine Crop Circles Dating from July 1880 as Published in *Nature* in the Year 1880”, *The Journal of Meteorology / Le Journal de Météorologie*, 25.245, 2000, 20–22.
- 5 [*ibid.*] p21.
- 6 [*ibid.*] p22.
- 7 Anon: “Home News”, *The Freemasons’ Magazine: or, General and Complete Library*, Aug 1794, pp149–152.
- 8 van Doorn, *op.cit.* p22.
- 9 RH Eather: *Majestic Lights; The Aurora in Science, History, and the Arts*, American Geophysical Union, Washington, DC, 1980, p35; S Silverman: “Early Auroral Observations”, *Journal of Atmospheric and Solar-Terrestrial Physics*, 60, 1998, 997–1006.
- 10 Pliny: *Naturalis Historia*, 2.23.91, tr. Rackham 1967, pp234–235.
- 11 Campester & Petosiris, apud Servius: *In Vergilii Aeneidis*

Commentarius, 10. 272, eds.; Thilo & Hagen, *op.cit.*, pp422–423.

12 Campester, apud Lydus: *De Ostentis*, 15b, ed. Wachsmuth, 1897, p44.

13 Nechepso-Petosiris, apud Hephaestio of Thebes: *Apotelesmatica*, 1.24.11, ed. Pingree, 1973, p76, trs. Irby-Massie & Keyser 2002, p90.

FURTHER READING

- GL Irby-Massie & PT Keyser, eds: *Greek Science of the Hellenistic Era; A Sourcebook*, Routledge, 2002.
- D Pingree, ed: *Hephaestionis Thebani Apotelesmaticorum Libri Tres* (1 of 3), Teubner Verlagsgesellschaft, Leipzig, 1973.
- SM Silverman: “Low Latitude Auroras Prior to 1200 C.E. and Ezekiel’s Vision”, *Advances in Space Research*, 38, 2006, 200–208.
- G Thilo & H Hagen, eds: *Servii Grammatici qui Feruntur In Vergilii Carmina Commentarii* (2 of 3), Georg Olms Verlagbuchhandlung, Hildesheim, 1961.
- C Wachsmuth, ed: *Ioannis Laurentii Lydi Liber de Ostentis et Calendaria Graecia Omnia* (BG Teubner, Leipzig, 1897.