

CROP CIRCLES CONTINUED: **A Review of the Phenomenon** **by Colin Deane***

Cast your mind back to 1991. Quite an eventful year. Saddam Hussein invaded Kuwait, Nelson Mandela was elected president of South Africa, the USSR disintegrated and gave way to democracy. Yet there was one, overriding topic of conversation in the air. What was causing strange patterns to appear up and down the land?

Hardly a day passed during that long, hot summer, without more reports from riled farmers that their crops had become victim to the unexplained phenomena. By night, whole swathes of corn, wheat and other crops, were becoming flattened, the morning light revealing mysterious patterns. Some were small, simple designs; others were larger and more complex. Whatever was occurring had caught the public imagination. Thousands came from all corners of the globe, each hoping to see a crop circle for themselves. Or better still, to witness one being made.

Not even the prime minister escaped the furore. In one of the more notable cases, a crop circle formation, consisting of several circles, had appeared in the then Prime Minister John Major's country residence. It had materialized inside the security fence, amidst anti-terrorist security. The press speculated. One headline read: "NOW EXPLAIN THIS." Had aliens landed at the PM's holiday home? Or had clever hoaxers beaten anti terrorist security? Neither apparently. An official statement was issued attributing the design to "poor soil conditions."

The rabid, media, feeding frenzy was being fed daily by the appearance of yet more formations, accompanied by stories of UFO sightings and abductions. But summer drew to a close, September set in and farmers began to fell their crops. Media interest began to ebb.

Later that month the headlines exploded. Two men had come forward, Doug Bower and Dave Chorley, both of whom claimed to have been responsible for the creation of every crop circle that had appeared since 1976. The duo, both in their sixties, described to the international media how they had "fooled the world for the last fifteen years." But fifteen years of running around in the middle of the night, jumping over barbed wire fencing and eluding vigilant landowners was taking its toll. They weren't "getting any younger"; the time had arrived to finally come clean on their nocturnal tomfoolery.

To back up their claims, the men demonstrated their method in front of the worlds press. Cameras rolling, they got to work. Using nothing but a metal stake, a piece of string and a small wooden plank, the team had managed to produce a perfect circle in less than half an hour. The press

had their circle and the public had its explanation. The party, or so it seemed, was over.

The ET brigade and a hardcore of researchers remained resolute and public disbelief did little to dampen their spirits. Although national newspapers had stopped running stories on the UFO link, many people still supported the idea, explaining the phenomena as being down to alien visitation. An enthusiastic, American tourist, enamoured with the ET theory, produced a huge formation of his own, spelling: 'TALK TO US.' Further distress befell the relevant farmer when only a few days later more of his corn became victim, only this time to a large tract of ancient Hebraic text apparently fashioned as a reply.

Despite ridicule and a hostile press, researchers asserted that a great deal of questions remained to be answered. In many peoples' eyes, Doug And Dave's story was all too inadequate in accounting for some of the more curious anomalies evident in around 20% of crop circles. These, amongst others include:

- A bending at the node (elbow) on the stork of plants within a formation. Nobody has been able to explain how this is possible, as standing on corn, or oil seed rape, would invariably cause the stems to snap.
- Laboratory analysis has often shown affected plant matter to have undergone molecular change, the cell walls becoming swollen and expanded.
- The ground underneath crop circles often appears considerably dehydrated, the soil appearing broken and cracked, even after heavy rain.
- Radiation levels within a crop circle have been measured as being 10 times above average.

Even if Doug and Dave did somehow manage to produce the above effects they have never offered an explanation how. Neither have they endeavoured to account for their methods in creating some of the complex designs.

Following the most reputed formation of 1996, the triple Julia set fractal; an engineering company was asked to replicate the design. They replied that due to the complex mathematical structure of the pattern, the preliminary groundwork alone would take 11 days and use metal stakes in order to map the design. It would also have incurred a cost of over £5000. No evidence of stakes being used was there on Windmill hill that day!

More evidence of Doug and Dave's mendacity became apparent during a television interview with the surviving member of the duo, Doug Bower. When pressed to give technical data he was unable and tried to skirt around the issue. A leading researcher, Colin Andrews, also

present on the show, asked Mr Bower how he could account for 2300 recorded formations, when he had claimed responsibility to only 200. This forced him to back down on his original claim that he had been responsible for all the formations since 1976.

There were still, as researchers had maintained, a great deal of questions that two men, a piece of string and a stick, could not answer, especially after the debunking of the most widely accepted, sceptical theory to date. During the 1980's, well before Doug and Dave surfaced, Dr Terrence Meadon, a distinguished scientist, formulated what had become known as the 'plasma-vortex theory' in an attempt to explain the phenomena. Meadon postulated that previously unrecognised vortices were forming high above the ground and suddenly descending in a lightning type strike, thus explaining the spiral swirl displayed by a great deal of crop circles. His theory won considerable support. From their lab in Japan, Dr Y.H. Ohtsuki and Prof. H. Ofuruton corroborated Meadons' claims by producing similar vortices using electrostatic discharge and microwave interference. Further evidence was provided in the form of research by Prof. H. Kikuchi, also of Japan, who provided theoretical models of Dr Meadons' plasma vortices.

As satisfactory as this theory appeared to be, it rapidly began to lose face, as it could not account for the complex pictograms, that by this time had started to appear on the scene. These were more than the familiar lone circles of the 1980's. Groups of circles linked together by lines and curves increasingly appeared. They formed geometrically complex patterns, many of which drew reference to ancient religious symbols, such as the Celtic cross and the Jewish Star of David. All at once, Dr Meadon's plasma vortex theory was in dire need of revision. The idea that simple vortices could create such intricate glyphs seemed ludicrous.

Many more theories surfaced, each vying to offer an adequate explanation where Dr Meadon could not. All sorts of interesting propositions came to light. Everything from earth energy, to military experimentation were explored as a possible cause. Crop circle researchers, of whom some had been researching the phenomena since the seventies, were emerging more and more into the public eye.

Large-scale surveillance operations were mounted at Alton Barnes and Bratton castle, two of the areas most accustomed to hosting crop circle formations. Some of the fields in these areas were affected year after year. High tech equipment was used. Cameras were set up, alongside sound recording equipment and an infrared trip wire system.

The Bratton castle operation appeared to pay dividends early. In what was to be a three-week exercise, a formation had appeared on only the second day at the foot of the ancient hill fort. Although the creation of the circle was not caught on film, excited researchers hastily rushed

down to the scene, amongst them photographers and journalists all keen to get a slice of the action.

All concerned were then confronted with what was little more than an amateurish hoax. A simple design presented itself. The corn had been crudely and hurriedly trampled down. Left in its centre, as though on purpose, lay a ball of wire and a horoscope game. Disappointed by the hoax, the media presence dwindled, leaving only the hardcore of researchers and a few steadfast onlookers.

Several days on and only 440 yards from the hoaxed attempt, something altogether more compelling had cropped up. In a well-documented incident a whirl motion had been seen by two of the researchers through night vision lenses. The movement of this whirling motion lasting for some 15 seconds, defining the shape of a question mark. An observation was made of the field the very next day revealing a question mark design imprinted firmly into the corn.

This was one of many alleged sightings that had increasingly been coming to light. Members of the public and researchers alike had been claiming to have seen strange light shows, hours before the appearance of a new formation. Farmers too had often told stories of their herd animals behaving in an agitated manner or refusing to enter a certain part of the field, in which a new formation would show itself the next day.

Some eyewitness reports involved larger numbers of people and attracted the attention of the international media. On Tuesday the 10th of July 1990, the residents of Alton Barnes, in the vale of Pewsey were rudely awoken when all the dogs in the village began ceaselessly barking at a heavy buzzing noise that permeated the night air. Those that managed to sleep that night awoke to find that they were unable to travel to work. Many reported that they couldn't get their cars to start; something had rendered their vehicle batteries useless. Cars, vans and tractors, all completely dead. Shortly afterward, the village's inhabitants became aware that a vast formation, 603ft from end to end and quite the most elaborate to date, had materialized in an adjacent field. Meanwhile and only a few miles away, an almost identical pattern, in both size and design, had appeared.

The earliest recorded eyewitness account of modern times was in 1972, four years before Doug and Dave claimed to have started their hoaxing. On the 12th of August that year, Bruce Bond and Arthur Shuttlewood were sat on Star hill near Warminster admiring the night sky. From that vantage point they claimed to have observed a crop circle forming first hand: "Suddenly, I heard a noise. It seemed as if something pushed down the wheat. That night the air was completely still. I looked around. The moon had just appeared, shining brightly. In front of my eyes I could see an imprint taking shape. The wheat was forced down in a clockwise direction."

Despite the catalogue of sightings dating back to the seventies, the crop circle phenomenon is not an exclusively modern one. Reports of unexplainable circles appearing in the corn date back to the 17th century.

Robert Plot, professor of chemistry at Oxford and coincidentally the first to discover and record a dinosaur fossil, details what he termed 'fairy rings' in his book 'Natural history of Staffordshire', published 1686. In it, Plot describes his analysis of circles appearing in crop fields around the county of Staffordshire, sometimes in groups of three or more. The similarities between Plot's description of his 'fairy rings' and the characteristics demonstrated by today's spectacle are hard to ignore.

His observations include, circles with a diameter of 40yds or more, soil dehydration and white sulphurous residues. All of these features appear in many of the modern examples. He also drew reference to the tendency for increased crop yield within the area of a crop circle in successive years after it's formation. Of recent times, farmers often report non-coincidental, increased crop yields of up to 30%. Prof. Plot, winning considerable support from his contemporaries, concluded that the circles must have been due to lightning. With that, he laid his analysis to rest.

Over the years many scholars have stepped into the arena in an attempt to shed some light on the enduring mystery, some apparently willing to take a risk with their professional reputation.

An eminent astronomer, Dr. Gerald S Hawkins, formerly chairman of the Boston university astronomy department, filled an especially interesting chapter in the crop circle story. He had noticed that many crop circles displayed shared distance and number relationships. Using Euclidian geometry he discovered that he could prove four geometric theorems that were re-occurring throughout the formations that he had scrutinized. From them he was able to derive a fifth more general theorem that embodied the other four. Each of the five theorems also reflected certain musical, note relationships known as diatonic ratios. Never, in such a way had geometric theorems been linked to music.

Keeping his discovery to himself, Hawkins threw down the gauntlet to readers of Science news and Mathematics teacher, challenging them to determine his 'fifth theorem' using the other four. The months passed and still no one could discern the answer. What happened next was quite remarkable. Whilst the scientific world was still chewing over the challenge a crop circle had appeared in Wiltshire that Dr Hawkins at once recognised as representing his fifth geometric theorem. He was nothing short of flabbergasted. Sceptics slammed this latest development as pure coincidence even though the chances of such a coincidence occurring were millions to one! Whoever was responsible appeared to have a particularly detailed knowledge of mathematics and

geometry. They must also have been apt at producing the formation, to precise specifications, whilst in near total darkness and all within a few hours. Quite a feat of human ingenuity!

Another academic to wade in was Dr. William C. Levengood. A practising biophysicist, Dr. Levengood has a lab in Michigan at which he pursues his studies into bioelectrical energies found in plant matter. With over fifty papers for international scientific journals under his belt and holding six patents, his professional reputation commands respect. He became interested in the phenomenon as a result of his curiosity at a strange bending in the stalks of affected plants at a consistent height above the topsoil.

After analysing some samples taken from a crop circle in England and comparing them to control samples, he made some astonishing findings. The affected plant matter displayed a swelling in the cell walls. More strange still was that the pores in the cell walls had expanded and become trapezoidal shaped rather than the more usual, smooth, rounded shape. This led him to conclude that some kind of microwave energy must have affected the plants at some stage during their growth. He also found that he could easily bend the nodes of control material after subjecting it to brief microwave exposure in a microwave oven. Microwave exposure would also account for the intensely dehydrated soil evident in crop circles where nodal bending occurs.

Levengoods' findings encouraged him to establish his own research group. The Burke, Levengood and Talbot group is now one of the forerunners in international crop circle research.

The organisation to have attracted the most attention, however, is the CPRI group. Colin Andrews, a name synonymous with crop circle study, founded 'Circles Phenomenon Research International' to carry out general research into the subject of crop circles. Originally from Wiltshire, Andrews sacrificed his position as chief electrical engineer with the Test valley borough council, in order to spend more time researching the phenomena. He is one of only a handful in the world that does research on a full time basis. He is also co-author of the best selling 'Circular evidence' a book that appeared on the Queen's summer reading list, a Prestige's listing at the time.

With the best part of the last 20 years spent gathering information, Colin Andrews boasts the world's largest crop circle database. Although not a scientist, he is perhaps the foremost authority on the crop circle phenomenon and has given discourses all over the world. He was asked to present a paper to the United Nations and also travelled to Moscow to present his findings to an international assembly of scientists.

Enduring early nineties media scepticism he has held firm in his belief

that there is something of a genuine phenomena. His CPRI organization, based in Connecticut, famously attracted the attention of oil billionaire and former U.S. congressman, Laurence Rockefeller, who is known to have an interest in UFO's and matters paranormal. Mr Rockefeller's involvement has been extensive. His funding has helped secure a new computer system that exploits, satellite, global positioning technology, helping to track formations around the world. Rockefeller dollars have also paid for regular research flights over Hampshire and Wiltshire in England. Private investigators have also been hired in attempt to cast some light on what Andrews terms "a large scale hoaxing problem."

Colin Andrews believes that the British public are yet again starting to warm to the crop circle enigma: "Between 1990 and 1991 we saw the peak in public interest. Just about every town pub and street in the country was discussing the crop circle phenomena. Circular evidence reached the Queen's summer reading list and the crop circle phenomena was even mentioned in parliament. But that all dropped away with the Doug and Dave claims. Since then we have seen the public interest inch back again. I'm getting e-mails from all over the world asking me to give talks and share information."

He also believes, after much research, that he may have discovered the most significant development yet: "If these results prove to be valid, we could sitting on the most exciting development to date. My tests conclude that the magnetic field within 20% of crop circles is consistently a few degrees rotationally out of sink with the magnetic field of the earth. This would explain a number of things, the spiralling motion of the crop and apparent moisture loss for example."

At his CPRI base, Colin Andrews presides over a burgeoning mountain of data, regularly added to by his colleagues and ordinary members of the public alike. Information that he believes provides undeniable evidence that crop circles are a genuine mystery, not to be offhandedly discarded as the work of pranksters. Pranksters do play a role and are certainly responsible for some of the elaborate pieces of artwork, but as Andrews says: "We are still 20% unresolved. With 20% of crop circles we cannot see how they are made, as they show no evidence of human involvement."

Over recent years members of the scientific community have shown a sudden and responsible interest and have begun to throw their weight behind the good research that is already underway. Perhaps one day we may answer the crop circle question. Perhaps it has already been answered.

But as crop circles keep appearing in increasing numbers around the world displaying bizarre characteristics, one thing is for sure; whatever or whoever is responsible sure have their work cut out.

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