

Photographs by ANDREW HASSON

Secret of the crop circles

OBSERVER
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SCIENTISTS believe they have uncovered the secret of crop circles — mysterious rings of flattened grass or wheat that have been linked with flying saucers, ghosts and other supernatural phenomena.

After carrying out a national survey of the circles, Dr Terence Meaden, a British tornado expert, has discovered they are caused by rare meteorological events called stationary whirlwinds.

More than 50 crop circles are reported every year, and share some remarkable properties. They consist of flattened circles of vegetation (occasionally snow) with diameters ranging from 10 to 100 feet. Some even have second, outer rings of crushed crops outside the main circles.

There are no tracks leading up to them, while the crops within are flattened in spirals that emanate outward.

These startling features have led to endless speculation about possible causes. Some people claim they are the landing marks of flying saucers, while others have blamed deliberate hoaxes, downthrusts from helicopter blades, rutting deer or even hordes of rampant hedgehogs.

'Crop circles look artificial,' said Dr Meaden. 'They have a symmetry and a neatness which make it difficult not to believe some form of intelligence is behind them. However, I am afraid the cause comes from inner — not outer — space.'

Dr Meaden, who works for the Tornado and Storm Research Organisation based at Bradford upon Avon, has surveyed 150 crop circles reported over the past eight years — and is now convinced that freak weather is the cause. He pres-

ROBIN McKIE explains how scientists cleared 'spacemen' of causing a farmland mystery.

ented details of his findings at a meteorology conference at Oxford yesterday.

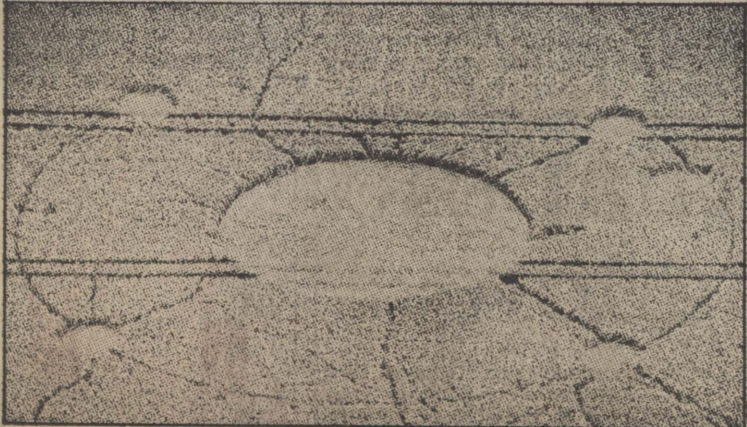
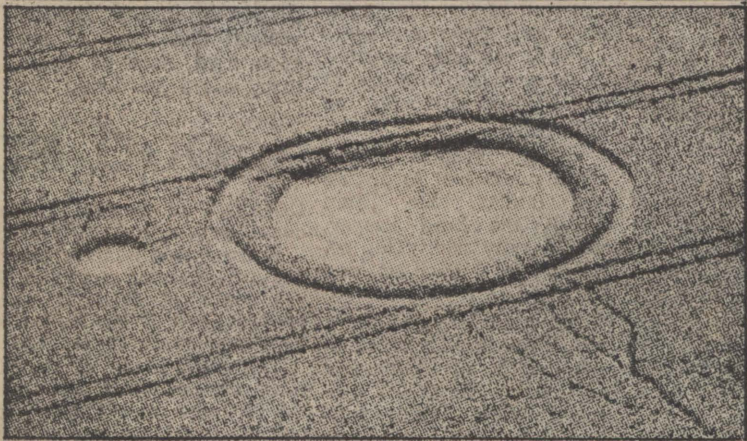
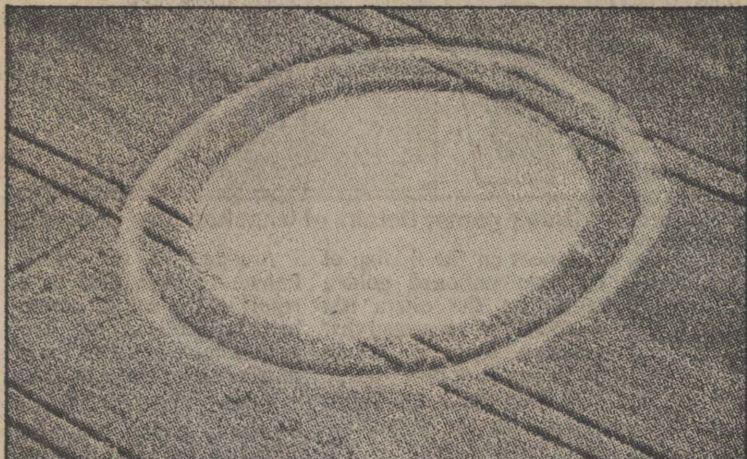
Most crop circles are found near hills and Dr Meaden believes these are crucial to their formation. 'Wind usually blows round both sides of a hill and merges smoothly round the other side,' he said.

'However, sometimes there is a sudden gust on one side but not the other which creates vortices or sudden whirlwinds. These sink to the ground and flatten crops in a spiral. However, they only last for a few seconds which is why they only do relatively little damage.

'They are a bit like the whirlpools you briefly get in rivers when water flows past a bridge or pier.'

He admitted that he could not account for some of the more bizarre, geometric patterns of circles that occasionally occur. 'They are more difficult to explain. I think we will need a bit more help from theoretical physicists to understand them.'

Last year, Dr Meaden investigated more than 60 crop circles round Britain, but there are probably hundreds of stationary whirlwinds each year. Only those in June, July, and August — when there are crops on the ground — have their imprints preserved for posterity and investigation by scientists. Others in winter fall on barren ground and go unnoticed.



Circles from the air: Puzzle patterns in three cornfields.