



# Flying saucer seeks life on Mars

**John Hartlow**  
 DEFYING science-fiction conventions, NASA sent a flying saucer to Mars yesterday. The saucer-shaped "aeroshell" will gently drop a vehicle onto the dusty surface, the latest move in a never-ending hunt for life on the red planet. It will be 9½ months before the aeroshell carries out one of the most delicate pieces of car parking in history. The six-wheeled rover, named Curiosity, is the most elaborate and expensive vehicle ever sent to Mars — but the scientific rewards could be extraordinary. Curiosity will land near canyons believed to have been carved by running water which, most scientists now believe, periodically floods the surface and may have provided the building blocks of subterranean life. NASA is wary of describing the \$2.5 billion (£1.9 billion) mission as a "bug hunt" for fear of disappointing American tax-payers if they fail to find anything short of little green men. But for many scientists Curiosity is an exciting adventure.

Mars remains a formidable challenge: two out of three missions have failed, most recently at the beginning of this month when a Russian probe called Phobos-Grunt heading for a Martian moon got stuck in low orbit and may fall back to Earth over the next few days. In 1999 NASA's Polar Lander crash-landed on Mars because scientists mixed up their imperial and metric calculations. Curiosity was launched into space inside an Atlas 5 rocket from Cape Canaveral in Florida yesterday. It will start falling into Martian gravity, inside its flying saucer shell, in August next year. Two previous rovers, Spirit and Opportunity, bounced onto the surface on airbags. But the Mini car-sized Curiosity is twice as big so NASA scientists at the Jet Propulsion Laboratory near Los Angeles have developed a new landing system which could pave the way for man's exploration of the planet. That is still 25 years away, even if astronauts win their philosophical battle with the champions of purely robotic exploration which is cheaper and safer — but less inspiring.

Curiosity's flying saucer will separate from its space travelling platform 10 minutes before hitting the thin Martian atmosphere, which it will enter at 13,000mph. It will use thrusters to slow itself down to about 1,000mph, when it will deploy a parachute. About 60ft above the ground the saucer will hover and gently lower the Rover on four cables down to the flat surface of the Gale crater. Then the saucer will reverse the thrusters and crash at a safe distance, leaving the rover to unfurl its antennae and sensors, turn on its engine and begin its two-year drive. The "drivers" of the vehicle will be back on Earth at computer screens. Because a signal takes 20 minutes to reach Mars, controlling the rover cannot be done in real time. Instead, NASA scientists will programme a journey into the computer and send it to the vehicle. This is where the hard science begins, using lasers to shatter rock and analyse soil and ice samples for molecules associated with past life and future mining prospects. Curiosity will climb up a



Atlas 5 blasts off yesterday

three-mile high pile of sediment looking for tiny fragments of soil which may have been washed up from under the surface, where many believe life may still linger. "This is a Mars scientist's dream machine," said Ashwin Vasavada, a leading engineer at the Jet Propulsion Laboratory. "This is the most sophis-

ticated scientific explorer we have ever sent out — we are super-excited." Even getting to the launch has not been easy. Building costs went 30% over budget as problems arose with wheels and engines. The cash-strapped agency is now sharing the 10 separate "mission engines" within Curiosity with scientists in Russia, Canada and Spain. The launch comes at a critical time for NASA. The White House recently denied that the US government had any evidence for extraterrestrial visitors to Earth, inadvertently giving ammunition to those who believe it is hiding aliens recovered from a crashed spacecraft in Roswell, New Mexico, half a century ago. "Otherwise why would they deny it?" asked a tweeter. The White House insisted it would be more productive to look for signs of aliens in space, whether on Mars or beyond the solar system. "Let's go see them before they come to see us," joked a White House official. It is a responsibility that NASA takes very seriously indeed.

# Clients sue resorts boss in Madrid

**Fergal MacErlean**  
 THE property developer Darragh MacAnthony is facing a criminal investigation in Spain after dozens of former customers complained that furniture they bought from one of his firms never materialised. MacAnthony Realty International (MRI) developed resorts in several countries and sold furniture packs to clients, 50 of whom filed a claim in Madrid in June. This group of Irish and British investors and buyers claim that €492,000 worth of furniture, ordered more than five years ago for apartments in Morocco, Bulgaria and Cape Verde, was never delivered.



MacAnthony: denials

Under Spanish law, members of the public are entitled to initiate criminal procedure in some cases. The complaint was referred to a court in Marbella, where it was recently accepted. A judge will hear evidence from the claimants in January, then decide whether MacAnthony and five other defendants should face charges of "misappropriation of funds and theft by swindle". Antonio Flores, the group's Spanish lawyer, claims "many other" MRI customers are affected. He alleges that missing furniture is just one of the irregularities linked to MRI, or related companies such as MRI Overseas Property. Flores says that he is preparing a further claim, totalling €15m, on behalf of 200 Irish and British MRI customers. MRI has consistently denied any allegations of wrongdoing. In relation to undelivered furniture, the company has said the 2008 property crash forced several of its furniture suppliers out

emerged, starting with a construction delay. Andrews said: "I kept emailing the furniture department and was being told the furniture would be delivered. In the autumn the MRI website announced furniture ordered over a year previously could be destroyed without compensation." The Andrews say they asked MRI to "snag" their apartment but were referred to Solutions Overseas property consultants, which told them the service would cost another €900. Solutions Overseas was registered to MacAnthony's brother-in-law, Wayne Mottley. He is the husband of Wendy MacAnthony, who fronted MRI's television-marketing campaigns, which was listed at a Marbella address two doors from MRI. In 2005, MRI's recommended mortgage providers Capital Financial Partners (CFP) was transferred from the sole administration of Darragh MacAnthony to Mottley. CFP was also registered to the same Costa del Sol street. MacAnthony, the chairman of Peterborough United football club, didn't reply to questions from The Sunday Times last week regarding either the companies recommended by MRI or the allegations of wrong-doing. Mottley did not return calls. MacAnthony has previously said: "There are no foundations behind these allegations. I certainly didn't do anything wrong and neither did anyone with MRI when I was there." He also said: "I operated a company which did thousands of sales around the world with many happy clients, but will forever be haunted by the few hundred for which it didn't work out."

# Violent video games really do change the brain, study finds

**Jonathan Leake**  
 Science Editor  
 PLAYING violent video games regularly for just a week can produce significant physical changes in the brain, researchers have discovered. They found that playing the games led to reduced activity in two key areas of higher-level functioning. The study is the first to show violent games can physically alter the brain, and will fuel the controversy over the effect that the widespread use of such games might have on individuals and society. Some critics, such as the Oxford University neuroscientist Baroness Greenfield, have argued that such games are so intense and

brutal they may reduce empathy and increase aggression. In the study, at the Indiana University School of Medicine in Indianapolis, scientists carried out MRI scans on 22 men aged 18-29 and then split them into two groups. One group was asked to play violent computer games for at least 10 hours in a week, after which they had another scan. The second was used as a control and played no such games. In an abstract of the report, to be published at the annual meeting of the Radiological Society of North America this week, the researchers write that the effects on the brain were observed in the left inferior frontal lobe and the anterior

cingulate cortex. "Subjects showed relatively less activation in prefrontal regions associated with executive function following one week of violent video game playing," the scientists write. "This investigation provides the first longitudinal, experimental investigation of video game play on brain activity." Such a study is limited as the sample size was so small and the time span during which it observed subjects so short. In addition, there was no suggestion that the subjects' behaviour changed. Its importance lies, however, in finding that violent games could alter the workings of the brain. Fears over the effect of video

games are based partly on the phenomenon of brain plasticity, whereby the brain alters over long periods, like a muscle, in response to demands placed on it. The new research coincides with another study from Texas A&M University. This tracked 165 young people for three years to see whether exposure to computer games was linked to antisocial behaviour, aggression or depression. The study, in the Journal of Psychiatric Research, found no connection. However, even if there were a link, the cure could be simple. The Indianapolis researchers found that, a week after their subjects stopped playing violent games, their brains had returned to normal.

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