Jaw Dropper

British crop circle aficionados were worried that tight restrictions on access to farmlands would put a crimp on this year's crop circle production. But art is evidently more powerful than foot-and-mouth disease. So far, 78 crop circles have appeared in the U.K., including a dazzling fractal-type design, discovered on 13 August, described as "jaw-dropping" by John Lundberg, author of the *Circlemakers Bulletin*. Appearing in Wiltshire in southern England, the heart of crop circle country, it comprises 409 circles in a spiral pattern more than 450 meters across—dwarfing the 60-meter average diameter of this year's designs.

Aerial view of whopping crop circle.

Lundberg says that the "sheer scale and complexity" of this opus has many people baffled. He estimates that for it to have been done in 4 hours of darkness, the makers had to create circles at a rate of one every 30 seconds—with no time for preliminary survey work. "I know from previous experience," he says, "that after a certain length [about 60 meters] it's very difficult to hold a tape measure above the crop without it snagging."

Mouse Skin Exhibits Versatility

Skin grafts are a common way to replace damaged skin. But if new work on skin stem cells pans out, an individual's skin might someday be used to repair internal organs as well.

Stem cells are undifferentiated cells that can divide to produce either stem cells or more specific cells. Stem cells from embryos may grow into almost any kind of cell, but until recently, stem cells from adult tissue were seen as having limited potential. In another challenge to that assumption, biologists at McGill University in Montreal claim in the September issue of *Nature Cell Biology* that cells isolated from mouse skin seem to be able to turn into nerve, muscle, or fat cells.

If human skin cells could be coaxed to become other types, they would be "a dream source" of stem cells, says researcher Freda Miller: easy to get and posing no danger of immune rejection by the patient. To test that idea, she and her colleagues took skin samples from mice and grew the cells suspended in culture. Some of them formed spherical conglomerations that resembled so-called neurospheres formed by neural stem cells. When the team transferred cells from the spheres to grow on plates in different culture conditions, they found that they could form at least three cell types. In one culture, more than 60% of the cells expressed nestin, a protein typical of neural precursors, and later began to express proteins typical of maturing neurons and neural support cells. Other culture conditions prompted cells to express a protein typical of smooth muscle cells, while still others promoted formation of apparent fat cells. Miller says that the original cells have retained their ability to differentiate even after more than a year growing in culture. The team is also working with human stem cells, from scalp tissue.

The neural cells "really look like neurons," says cell biologist Derek van der Kooy of the University of Toronto. He cautions, however, that the cells' worth needs to be proven in living animals.

Sun-Powered Flight Test

Propelled by 14 tiny motors with the power of blow dryers and moving at bicycle speeds, NASA's solar-powered flying wing, the Helios, completed a 1-day flight last week after setting an altitude record for non–rocket powered aircraft. The 75-meter-long, 600-kilogram wing reached 30,000 meters—three times the normal altitude for commercial jets. NASA officials brought the remote-controlled vehicle down 500 meters short of its goal because the thin air and slanting late-day sun prevented it from climbing any higher.

Helios is envisioned as a model for cheap "atmospheric satellites" for data collection and telecommunications. It's also supposed to yield information about the aerodynamics of flying in a very thin atmosphere, which may some day come in handy on Mars. Fuel cells that store energy overnight remain to be perfected.

Helios over Hawaii.

French Panel Pans Astrologer's Ph.D.

An interdisciplinary group that battles pseudoscience has joined a chorus of scientists critical of the Ph.D. awarded by the Sorbonne to France's best known astrologist.

In April, Elizabeth Teissier was awarded a doctorate "with distinction" in sociology for a 900-page opus on the attitude of "postmodern" societies toward astrology (*Science*, 27 April, p. 635). Both astronomers and sociologists set up a howl over the award, and the French Association of Scientific Information appointed a group to review the thesis.

Its report, released this month, heaps ridicule on Teissier's thesis, saying it is riddled with errors, misinterpretations of sociological theory, ignorance about astronomy, and "bombastic ... and often incomprehensible" prose. The scientists conclude that her effort is nothing but a brief for astrology and "is not at any point, in any way, a sociology thesis."

Teissier's thesis adviser, Sorbonne sociologist Michel Maffesoli, still defends her work. Maffesoli, who heads the Centre d'Etudes sur l'Actuel et le Quotidien (translated literally as "Center for Studies on the Current and the Daily"), says the panel's chair, Bernard Lahire, a sociologist at the Ecole Normale Supérieure de Lettres et Sciences Humaines in Lyon, represents only one school of sociology and is not equipped to pass judgment on "what is and what is not sociology." The views of astronomers, he adds, are irrelevant to the subject.

But panel member Denis Savoie, science historian at the Palais de la Découverte in Paris, says he hopes French universities will wake up to the toll that this "disastrous affair" has taken on their credibility.

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