

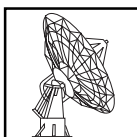
“Immediately after the tribulation of those days shall the sun be darkened, and the moon shall not give her light, and the stars shall fall from heaven, and the powers of the heavens shall be shaken: and then shall appear the sign of the Son of man in heaven: and then shall all the tribes of the earth mourn, and they shall see the Son of man coming in the clouds of heaven with power and great glory” (Mt. 24:29,30);

“And when these things begin to come to pass, then look up, and lift up your heads; for your redemption draweth nigh . . . when ye see these things come to pass, know ye that the kingdom of God is nigh at hand. Verily I say unto you, This generation shall not pass away, till all be fulfilled” (Lk. 21:28,31,32).

The heavens of Israel have been darkened for many centuries, but in 1948 the democracy of the State of Israel entered those heavens as a bright meteor, and has since been the sign of a sequence of events soon to culminate in the reappearance of Christ in power and glory. Having a human basis, the State of Israel can only be a shadow of what will come, and is due to be eclipsed, probably broken up by the destructive power of an invader, and then replaced by the glory of the Sun of righteousness when he comes to save the refugees of Judah and to commence his reign from Jerusalem (Zech. 12:7; Mal. 4:2).

God willing, the final article will consider Israel's special place in God's purpose.

(To be concluded)



Science

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Science update

Recent news from the world of science

David Burges

Recognising faces

THE RECOGNITION of faces forms a vital function in our daily lives, and studies of the human brain have revealed that many areas in addition to the visual system are activated when we study a face. We are in fact very good at memorising facial features, and most of us will admit to being much better at recognising faces than at recalling the names that are attached to them! Which of us has not experienced the embarrassment of talking to another brother or sister in Christ, perhaps at a gathering, whose face is perfectly familiar but whose name is completely forgotten?

We are generally quite unaware of the astonishing processes taking place in our brains that allow us to perform these feats of visual memory. Much scientific research is currently taking place to elucidate the methods by which the brain functions to achieve such results, often by studying the brains of patients who suffer particular de-

fects as the result of disease or injury. One notable case¹ is that of a man who survived a car accident and recovered from his injuries but was left unable to recognise faces, a condition known as prosopagnosia, caused by damage to a particular part of the visual cortex in the brain. His condition is illustrated by an incident when he entered a room, and, seeing a man he thought was a friend, greeted him. But there was no response, and he realised he was looking at a mirrored wall and a reflection of himself.

Recent research by scientists at the University of Sheffield and University College, London,² has compared the facial recognition capabilities of babies and adults, using analysis of eye movements and patterns of brain activity. The tests produced the surprising result that babies seem better at facial recognition than adults. Babies as

1. *Brain Story*, Susan Greenfield, 2000, p. 71.
2. "Babies recognise faces better than adults", BBC On-Line Network, Health section, 16 May 2002, reporting work published in *Science*.

young as six months easily distinguished between faces of both humans and monkeys, while adults were unable to distinguish monkeys' faces. This suggests that infants are born with a highly developed ability which gradually diminishes with age, when it might have been expected that such a skill would be gained by learning.

The study has interesting implications not mentioned in the report of its findings. If facial recognition is not learned it must be inherited, meaning that some amazingly complex 'software' is preprogrammed into the genes, enabling the visual cortex of the brain to collect and memorise the many elements comprising a 'face'. Here is a classic example of an aptitude which testifies to intelligent design by the Creator. It is beyond credibility that such a complex ability could have arisen by chance mutations and natural selection.

'Nature' knows best

ATENTION has often been drawn in these pages to the ongoing interest among scientists in copying or mimicking biological structures and processes from nature, now referred to as *biomimetics*.³ As a further instance of learning from nature, researchers are currently exploring various ways of utilising living organisms to help in combating the damaging environmental effects of many industrial processes.⁴

For example, scientists at the University of Ohio are testing a new type of bioreactor, employing algae to reduce the carbon dioxide emissions from power stations. With sunlight piped into the reactor the algae grow rapidly, using the rich supply of carbon dioxide, and they could be harvested for use as a fuel, fertiliser or soil stabiliser. It is estimated that up to twenty per cent of the carbon dioxide from an average-sized power station could be removed, producing at least 200,000 tons per year of algae.

Other research teams are studying the ability of certain plants to extract toxic substances from contaminated soils. One group is running trials using the sea beet, *Beta vulgaris*, to absorb radioactive isotopes from the soils around a nuclear power station, while another is working with a fern, *Pteris vittata*, which has been found to have a remarkable ability to absorb arsenic from sites contaminated by mining or agricultural operations.

We might wonder if techniques like these will be one way in which the polluted earth will be

cleansed in the Kingdom age. But at the least they are a continuing reminder of the wisdom everywhere revealed in the handiwork of the Creator, which men perversely attribute to 'Nature' and chance, but to which they are increasingly turning for instruction.

New eye cells activate the body's clock

IT has been believed for more than 100 years that the retina of the eye has just two types of light-sensitive cells: rods and cones. These capture light, producing electrical signals that are sent to the brain, where images are formed. It was also thought that they were responsible for setting the body's biological clock, thought to be located in a small region⁵ just above the optic nerve on both sides of the brain. There a tiny speck of tissue controls the twenty-four-hour circadian rhythm of waking and sleeping by making and consuming proteins in a precisely timed fashion.

However, recently,⁶ experiments carried out by researchers using mice genetically engineered to have no rods or cones found that, although blind, their daily rhythms were still aligned to natural day and night cycles, exactly like normal mice. Meanwhile, other workers discovered a light-sensitive molecule, melanopsin, in the skin cells of African clawed frogs that change colour in the light. To the scientists' surprise, it was found that melanopsin occurs in a small number of specialised cells, known as ganglion cells, in the retinas of mice, monkeys and humans, which are connected to the body-clock region of the brain. Further experiments demonstrated that these cells did indeed respond to light, and that they are almost certainly responsible for synchronising the body clock which regulates our lives with the daily cycle of day and night.

It is remarkable that a structure of the body that has been known and studied for so long was capable of producing such a surprise. But even

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3. See, for example, "[Composite materials—an example of Divine design](#)", May 2001, p. 196, and "Imitating nature's designs", Sept. 1998, p. 346.
 4. "Nature knows best", *The Chemical Engineer*, Sept. 2000, p. 20, kindly submitted by a reader.
 5. Referred to as the suprachiasmatic nucleus, or SCN.
 6. "Eye cell tied to body clock shocks experts", Sandra Blakeslee, *New York Times*, 8 Feb. 2002, reporting work published in *Science*.

more remarkable is the beauty and complexity of the multitude of such wonderfully contrived systems that operate in the living world and which give testimony to the genius of God the Creator.

Another fake fossil exposed

MANY palaeontologists are convinced that birds evolved from the dinosaurs, and so the scientific examination of a specimen of a new fossil hailed as a missing link between dinosaurs and birds caused great excitement. The fossil, which was named *Archaeoraptor*, had a bird's head and wings and the legs and tail of a small dinosaur, and was believed to come from Liaoning Province in China. Several eminent professors studied the fossil and proclaimed it a genuine missing link. Accordingly the fossil was accorded star status in the October 1999 edition of *National Geographical Magazine*.

Subsequently a Chinese palaeontologist, eagerly searching for further specimens of *Archaeoraptor*, was astonished to find in the shop of a dealer fossilised parts that exactly matched half of the original fossil. Further detailed examination of the original fossil, using a medical technique called computed tomography, revealed that it had been assembled by cementing pieces from several unrelated fossils onto a stone slab, making a mosaic which fooled the scientific world.⁷ It was but the latest in a series of such frauds, the most famous of which was Piltdown Man.

The story is yet more evidence, if more were needed, that scientists are very far from being infallible, as some would wish to pretend. Since the whole evolutionary 'tree of life' is in reality no more than a pack of cards, the palaeontologists are desperate for pieces of 'evidence' that will give some plausibility to the scheme. Hence, as one professor remarked, "People who believe strongly in an idea can be easily fooled!"

The scientists tried to salvage some crumbs of comfort from what was a thoroughly embarrassing episode by suggesting that the two part-fossils from which the fake had been assembled each showed transitional features from dinosaurs to birds—which only goes to show that they have learned little from their previous failure. The fact is that birds have many unique adaptations, such as special lightweight bone structure, insulating and flight feathers, and acute eyesight, that are very far from dinosaur characteristics and cannot have arisen *in combination* by random mutations.

Truly, as believers in Creation by the God of heaven, we have no need to be ashamed of our faith, which is supported by a vast range of scientific evidence. Rather, we can boldly proclaim the Creator's words from Scripture: "I have made the earth, the man and the beast that are upon the ground, by My great power and by My outstretched arm" (Jer. 27:5).

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7. The full story was presented in a BBC Horizon programme, kindly copied to this editor by a reader.



Correspondence

Comments on articles appearing in the magazine are always welcome, and should be addressed to the editor in whose section the article appears.

Was the creation cursed?

Regarding the comments in the March issue (pp. 82-84) on my January 2002 article, answers to some of the comments of my critics will be found by a careful reading of the article, and require no further comment from me. For example, some of Brother Carlo Barbaresi's criticisms relate to the concept of long-period days, which I do not advocate. I am suggesting that the days of Genesis 1 were human time frames, during which God gives us a thematic description of Creation.

All my critics quote Exodus 20:11 to support their belief in a literal six-day Creation, but none quotes the parallel passage in Exodus 31:17, which reads: "It is a sign between Me and the children of Israel for ever: for in six days the LORD made heaven and earth, and on the seventh day He rested, *and was refreshed*". If the days in this verse are literal then so is God's need for refreshment, and yet Isaiah 40:28 tells us that "the everlasting God, the LORD, the Creator of the ends of the earth, fainteth not, neither is weary".