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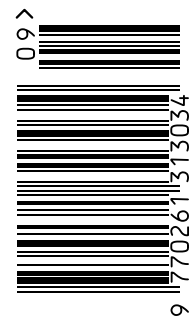
**ON A WING  
AND A  
PRAYER**  
the beginning  
of the end for  
cheap flights


**ARE WE ALL TELEPATHIC?**



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# THIS MONTH IN HISTORY: SEPTEMBER 1882

On 4 September 1882 Thomas Edison displayed the first practical electrical lighting system. He successfully turned on the lights in a square-mile area of New York, using the world's first electricity generating plant. One hundred and twenty-three years later, the amount of light emitted into the skies each night means that 90 per cent of people in the UK can no longer properly see the night sky. Scientific data increasingly suggests that our bodies need a balance of night and day to properly function. Two 2001 studies suggested a link between exposure to nocturnal light and breast cancer. And in Finland, which has one of the world's highest suicide rates, the most likely time for people to kill themselves is not during the long dark winter nights but during the interminable light of summer. No wonder Amnesty lists 'exposure to 24-hour lighting' as a torture technique. The impact of our over-illuminated world is felt across the animal kingdom. Birds sing at night and build nests in autumn. Turtles turn back towards the ocean rather than lay their eggs on over-lit beaches. So bad can the problem be in cities that the John Hancock Center in Chicago has stopped lighting its building at night in the hope of saving the nearly 1,500 birds that die each night during migration as a result of flying into the building's illuminated windows – the birds mistake the windows for the now invisible stars. Isn't it time we all got more switched on... and switched off, too?

Star-trail time exposure  
taken over a period of  
five hours, 45 minutes in  
New Mexico

# ecologist

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PHOTOGRAPH BY CORBIS

## EDITORIAL



To describe China as a 'sleeping giant' is wishful thinking. China is wide awake, and is set to dominate in every sense. So much so that Chinese nannies (I'm told) are now going for a premium in Washington, with wealthy businessmen eagerly looking to boost their children's chances in life with early Mandarin lessons.

No serious investor today can afford to ignore China. Jim Rogers, co-founder with George Soros of the Quantum Fund, begins his latest book by warning that 'when China sneezes, the rest of the world will be reaching for aspirin'. For him, we are on the verge of a commodity boom. It's hard to disagree.

China is currently laying out plans for 16 underground railway systems, which would be comparable to anything in Europe. The implications for steel and copper alone are staggering. And there are plans to build a road infrastructure larger than that in the US – except China hopes to accomplish in years what the US took decades to pull off.

Already, we're seeing the effect on 'soft commodities' of China's expansion. It has become, for instance, the world's second largest oil consumer and the world's biggest soya bean importer. It became a net importer of food for the first time last year. Rogers' prediction of a new boom looks solid. And that's wonderful news for some investors.

But it's the worst possible news for the environment. It's true that an economic hiccup in China will send prices temporarily tumbling, but they will recover along with demand. And it's usually true that high commodity prices will lead to general belt-tightening – although that doesn't appear to be happening yet in relation to oil.

Fundamentally, China's growth means more mines, more deforestation, more pressure on resources. This, combined with the fact that China's own bread basket in the country's northern plains is shrinking as a consequence of climate change, means still greater pressure on the world's natural riches.

The global economy, then, is being reshaped by China in a way that is obvious to everyone – except, apparently, EU leaders. The recently rejected (but far from abandoned) EU constitution goes well beyond providing a framework for decision-making. It actively enshrines a commitment to accelerated trade liberalisation and globalisation. In effect, it is a manifesto. At its heart is the assumption that accelerated free trade with China is a sustainable policy. It's not.

Look at textiles. The World Bank predicts that China's share of the world trade in textiles could jump from 17 per cent today to more than 50 per cent in the next four years. As a result, some analysts predict the loss of more than a million EU jobs before the end of next year. The effect in poorer countries, like Bangladesh, Sri Lanka and Pakistan, will be many times worse. And textiles aren't the only area under threat. The McKinsey Global Institute issued a report last month predicting that nearly 10 million US service jobs are at serious risk to China.

The scale of China's expansion is almost impossible to take in. But that's what our leaders have to do. It's no longer possible to hold the view that countries gain more than they lose when they open their borders and seek comparative advantage in a specialised economic sector. China enjoys, or is coming to enjoy, comparative advantage in virtually every sector. We cannot compete with China. And we shouldn't attempt to do so any more than we should force, as a condition of overseas aid, loans and debt relief, poorer nations to enter a competition they cannot win.

Globalisation and free trade are still regarded by our leaders as evolutionary forces. But the rise and rise of China will change that. And it may be that France and Holland's rejection of the EU constitution will one day be recognised as the beginning of that vital shift.

A handwritten signature in black ink, appearing to read 'Zac Goldsmith'.

THE ECOLOGIST SEPTEMBER 2005 | 005

# Letters

Send letters for publication to: Letters, The Ecologist, Unit 18, Chelsea Wharf, 15 Lots Road, London SW10 0QJ. Email: [editorial@theecologist.org](mailto:editorial@theecologist.org). The Ecologist reserves the right to edit letters as necessary.



**SAME OLD STORY**  
Re' 'All George W's men' (July/August 2005). Asked to give a toast before the prestigious New York Press Club, John Swinton, who in the 19th century was chief of staff at *The New York Times*, made this candid confession (it's worth noting that Swinton was called 'the dean of his profession' by other newsmen): "There is no such thing, at this date of the world's history, as an independent press. You know it and I know it. There is not one of you who dares to write your honest opinions, and if you did, you know beforehand that it would never appear in print."

'I am paid weekly for keeping my honest opinions out of the paper I am connected with. Others of you are paid similar salaries for similar things, and any of you who would be so foolish as to write honest opinions would be out on the streets looking for another job. If I allowed my honest opinions to appear in one issue of my paper, before 24 hours my occupation would be gone.'

"The business of the journalist is to destroy the truth; to lie outright; to pervert; to vilify; to fawn at the feet of Mammon, and to sell the country for his daily bread. You know it and I

know it and what folly is this toasting [the] independent press. We are the tools and vassals of the rich men behind the scenes. We are the jumping jacks; they pull the strings and we dance. Our talents, our possibilities and our lives are all the property of other men. We are intellectual prostitutes.'

**Rufus Madeley**  
Brockenhurst, Hampshire

## REJECTING GREEN CONSERVATISM

I agree with Aidan Rankin's assessment that the Green Party is top-heavy with refugees from old Labour and has alienated the huge reservoir of potential support from the other side of the now obsolete barricade ('Time for a new Ecology Party', February 2005, and 'Grassroots democracy', May 2005). But neither Rankin nor Michael Dunwell (Letters, June 2005) explains how a party consisting of ex-Conservative greens would be any better than a mirror image with exactly the same flaw.

I look forward with piquant anticipation to the contents of the manifesto Mr Dunwell suggests, and how it would differ from the Green Party's manifesto for a sustainable society. What

makes him think that the more than 75 per cent of the population who are not yet concerned about the environment would flock to it any more than to the Green Party's message?

The answer which I explore in my book, *A Citizens' Income: a foundation for a sustainable world* is that Greens from both sides of the old battle lines must go through half of an uncomfortable re-think. The existing Green Party membership must accept that a green vision is not identical to socialism; and their former enemies must accept that social justice, in practice meaning higher personal taxation of the better-off, is a prerequisite of a sustainable society.

**Clive Lord**  
Founder member of the Green Party  
Batley, Yorkshire

## ROUNDUP MADNESS

I've been told by a farmer that after he cleared annual weeds on his set-a-side ground with Monsanto's herbicide Roundup he noticed that all his worms had disappeared. Roundup is an organophosphate (OP) with a half-life of 100 days. Farmers are sold this product with the proviso that it is harmless in the soil. How can an OP derived from a nerve agent developed during WWII be harmless when it is still half-active after 100 days?

More worryingly, the whole GM research industry seems to revolve around creating food crops that are 'Roundup ready': they survive being sprayed with the pesticide, but competing weeds don't. Did you know that our soya and maize are

sprayed with OPs? Did you know the glucose syrup in your Coca-Cola is derived from GM maize and, most probably, OP-tainted? Bear in mind that OPs have been linked to Gulf War Syndrome and ME.

Incidentally, the farmer I refer to also used to spray barley and wheat crops with Roundup to 'ripen' them during wet summers, totally unaware he was spraying food crops that would never be washed with OPs. When I say used to, it's because he died of liver cancer at the age of 47 last year. God rest his soul.

**Name withheld at author's request  
By email**

### POVERTY MISUNDERSTOOD

For too long, the condition perceived as poverty has been grossly misunderstood. Dr Vandana Shiva's article ('New emperors, old clothes', August 2005) was a stark reminder of this. It is not those populations that survive by utilising nature's resources which are impoverished, but those Western cultures which, through industrialisation and its inherent developments, have forgotten how to sustain themselves without harming their environment.

It seems very strange that



### NE EMPERORS, OLD CLOTVES

Anyone serious about making poverty history needs to understand where poverty actually comes from and what it really is. **by email**

those of us living in the so-called 'civilised world' have become so tunnel-visioned by our throw-away lifestyle that our origins appear to belong to another civilisation, the one we now refer to as the 'Third World'. Just like the people in pre-industrial societies today, we once took pride in our ability to make clothes and implements by hand, using what the land around us could offer. We took pleasure in learning about agriculture and how it could best sustain us.

It's time to reassess. It is we who are the poorer for our distorted understanding of what poverty is; it is those countries we are trying to help that are the richer for largely maintaining their traditional skills. Their misfortune comes from means beyond their control: climatic conditions preventing self-sufficiency and a basic, but healthy economy; and a lack of education and resources to circumvent the diseases brought on by these problems.

**Carola Huttmann  
by email**

### MIDGE DILEMMA

Can anyone help? I live in the midge-infested Isle of Skye. In the last couple of years, Midge Eaters have become available. These are largish machines, running off Calor gas, and using pellets containing I don't know what that attract and zap the beasties.

I spend a large proportion of my life in the summer out in my garden, which is quite large. The midge season runs from about late May to early October. Such is the torture of attention from the midges that I have considered investing in one of these zappers. I do have midge hoods, and do cover my skin, but there is always

somewhere midges will crawl to; and on a warm day life in a midge hood gets unbearably sweaty.

What I would really like to know is how Midge Eaters are rated so far as a pollution index goes? What they pump out is carbon dioxide, but I don't know in what quantities, or whether it might present a real problem.

**Sue Tate  
Skye**

### LAUGHING INTO THEIR READY MEALS

Your 'Hero or zero?' column in the June issue paid a not so fond farewell to Sir John Krebs, departing head of the Food Standards Agency (FSA). Krebs' inaugural tenure of the agency was marked by a love of GM

and pandering to industry. Many of us, therefore, hoped that his departure would signal a shift in policy at the FSA away from favouring industry and towards doing what it's supposed to do - ie, look after the health of the public.

Late in July came the news that the FSA's proposed targets for reducing the level of salt in food have been weakened after industry complaints. Apparently, we the consumers are so used to high salt levels that it wouldn't be fair on us if the food multinationals cut them too far. Which begs the question: What is the point in having the FSA? It sets a target. Industry says no. So the FSA changes the target. The food giants must be laughing into their ready meals.

**Gail Perkins, By email**

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# up front



## UNPRECEDENTED STUDY FINDS WORRYING LEVELS OF TOXINS IN HUMAN BODY

The bodies of children and adults across America are laced with dozens of pesticides and toxic compounds, many of which are considered health risks. The largest investigation into human exposure to chemicals ever conducted, carried out by the US agency the Centers for Disease Control and Prevention, found that contamination is often greater in children than adults.

There have, however, been dramatic declines in the levels of lead and tobacco in children, declines that have been attributed to the partial removal of these

toxins from circulation. In the late 1970s, for example, 88.2 per cent of children had elevated levels of lead in their urine or bloodstream. That number has plummeted to just 1.6 per cent.

But Dr Jerome Paulson, an associate professor of paediatrics at the George Washington University School of Medicine and Health Sciences, said: 'The report in general shows that people – kids and adults – are exposed to things that aren't intended to be in their body. In and of itself, that is a concern... We have fouled our own nest.'



## ART NOT OIL GOES MOBILE TO TARGET BP PORTRAIT AWARD

The Art Not Oil exhibition, an annual event designed to counter the propaganda value of BP's sponsorship of the National Portrait Gallery's portrait award, is currently touring venues around the country. Art Not Oil aims to encourage artists to create work that explores the damage that companies like BP are doing to the planet, and the role art can play in diminishing that damage.

[www.artnotoil.org.uk](http://www.artnotoil.org.uk); [www.nationalpetroleumgallery.org.uk](http://www.nationalpetroleumgallery.org.uk)

### STORM WARMINGS

Global warming has greatly exacerbated the severity of hurricanes over the past 30 years, according to a report in the journal *Nature*. Hurricanes occurring in the Atlantic basin are twice as powerful now as they were three decades ago, says the report's author, Massachusetts Institute of Technology climatologist Kerry Emanuel. Her study is the first to make a statistical link between global warming and stronger Atlantic storms.

“ [Ours] is not a march in the sense of a demonstration, but more of a walk. The emphasis is on fun in the sun. The intention is to welcome the G8 leaders to Scotland and ask them to deliver trade justice, debt cancellation and increased aid to developing countries.”

Bruce Whitehead, media coordinator of the Make Poverty History, campaign, acknowledging (unintentionally) that protest has indeed been co-opted by those in power. 'Fun in the sun'? What, like in Niger?



### WASTE NOT. WANT NOT

Mark McGowan posing by *The Running Tap*, an exhibit at London's House Gallery. The artist says the purpose of his exhibit is to highlight water wastage. To which end he's simply left a tap running in a kitchen in the gallery. If left on for a full year (as the artist intends) the tap could waste approximately 3.9 million gallons of water. McGowan formerly hit the press for using his nose to push a peanut seven miles in a protest against student debt.

PHOTOGRAPH BY GUARDIAN NEWSPAPERS LTD 2005

### UP FRONT

## HERO OR ZERO?



### ZERO: JOHN BOLTON

**Who?** The new US ambassador to the UN, who secretary of state Condoleezza Rice called a 'tough-minded diplomat [with a] proven track record of multilateralism'. A spokesman for North Korea, in contrast, said: '[Bolton is] such human scum and [a] bloodsucker... we have decided not to consider him as an official of the US administration.'

No one, however, can explain what Bolton thinks better than Bolton himself.

**On the UN:** 'There is no such thing as the United Nations. There is an international community that occasionally can be led by the only real power left in the world, and that is the US when it suits our interest and we can get others to go along.'

**On the International Criminal Court:** 'A product of fuzzy-minded romanticism [that] is not just naive, but dangerous.'

**On the UN vote against invading Iraq:** 'Further evidence why nothing should be paid to the UN.'

**On the UN Security Council:** 'If I were redoing the Security Council today, I'd have one permanent member because that's the real reflection of the distribution of power in the world.'

**On international law:** 'It is a big mistake for us to grant any validity to international law even when it may seem in our short-term interest to do so; because, over the long term, those who think that international law really means anything are those who want to constrict the US.'

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## UP FRONT

### WHAT WE LEARNT LAST MONTH...

■ **A third of all fruit and vegetables in the UK is thrown away by farmers because supermarkets demand 'aesthetic perfection' regardless of the quality of the produce itself.**

■ Forcing prisoners to pretend they are dogs is not inhumane, according to the 12th major investigation into practices at Guantánamo Bay.

■ **All visitors to Disney World must now have their fingers scanned before being admitted to the Florida theme park.**

■ McDonald's asked hip-hop and fashion moguls Russell Simmons, P. Diddy and Tommy Hilfiger to redesign its company uniforms.

■ **A bar of soap made from fat said to have been sucked from Silvio Berlusconi during liposuction sold for £10,000**

■ The blood of newborn babies contains, on average, 200 industrial chemicals and pollutants.

■ **Seattle's new 'energy-efficient' city hall was found to be using up to 50 per cent more electricity than the building it replaced (which was also larger).**

■ Following their success in sequencing the genes of an extinct cave bear, Californian scientists are planning to have a go at sequencing a male Neanderthal's genome.

■ **There was an outcry in Germany when officials at Augsburg Zoo announced plans to display elephants and rhinoceroses in a 'natural environment' – ie, accompanied by black people wearing grass skirts.**

■ A new Microsoft web portal in China has banned certain users from creating homepages with the words 'democratic movement' and 'freedom' in them

■ **A jar said to be filled with air formerly used by the actors Brad Pitt and Angelina Jolie sold on eBay for £293.**

■ The Jordan River (in which Jesus is supposed to have been baptised) is now more than 50 per cent raw sewage and agricultural run-off.

■ **An American Rotary Club gave a Hummer away as top prize in a raffle raising money to build a new environmental awareness centre.**

■ Europe's oldest hippo (aged 53) was put on the pill after she gave birth for the 20th time.

■ **Sun cream for dogs went on sale.**



## TWO-YEAR-OLDS BRANDED BY TV ADVERTISING

BY DAVID BURKE

A new study shows that children as young as two years old easily recognise brand logos, and that the amount of TV they watch determines how much branding they can identify. Infants studied by Patti Valkenburg and Moniek Buijzen, the authors of *Identifying Determinants of Young Children's Brand Awareness: television, parents and peers*, were able to recognise eight out of 12 brands they were shown.

The research confirms the huge influence of television. Long before they can understand half of what their parents are saying to them, infants are being approached by advertisers and broadcasters. 'The current generation of children [is] the most brand-conscious ever,' said the report's authors. 'Our study has clearly shown that exposure to television has consequences for the brand recognition of even the youngest children.'

The scientists from the Amsterdam School of Communications Research singled out the BBC's TV programme *Teletubbies* as a show that made it acceptable to target children this young. They said: 'Whereas only one decade ago, [the marketing industry] used to limit its efforts to children older than six, recently it [has] progressively recognised infants and toddlers as a vital and undeniable target group. This trend has accelerated even more since the worldwide success of *Teletubbies*.'

Selling to children is nothing new. But selling to children who can't even speak is a recent innovation. Advice to parents that they 'be aware' of what television their children watch, or speak to them about what they see, looks increasingly insufficient. Broadcasters and advertisers count on messages getting through to young viewers regardless of what parents know. And if a child hasn't learned to talk, there is little point in discussing the finer points of consumerism and product placement.

Turn off the TV, however, and the brainwashing stops. Since 2001, the American Academy of Pediatrics has recommended that children under the age of two should not watch television at all. The academy advises that older children be limited to two hours' television a day. In Britain, a third of children under the age of four now have a TV set in their bedrooms.

■ David Burke is director of the anti-TV watchdog White Dot; [www.whitedot.org](http://www.whitedot.org)

**1.35**

**TRILLION DOLLARS**

**World military budget for 2004; the US accounts for almost half of this figure**

**TRUCK CALLS AND TRUNK ROADS**

An African elephant has displayed a skill more associated with types of bird – vocal mimicry. Scientists in the Tsavo region of Kenya, realised that certain calls being made by Mlaika, an orphaned 10-year-old female elephant kept in semi-captivity, sounded remarkably similar to the trucks using a road two miles from where she sleeps. Detailed scientific analysis of the sounds showed they had the same range of sound frequencies as the noise made by the trucks' engines. According to the scientists, elephants normally use such vocal skills to imitate other elephants and so strengthen social bonds within a close-knit family group. Vocal mimicry among animals other than birds is not unheard of: one of the more unusual examples concerns a seal kept at a zoo in Boston, which can say hello in a Bostonian accent.



**ORGANIC FARMING DOES SAME FOR LESS**

Organic farming uses 30 per cent less energy and water and no pesticides to produce the same yields of corn and soya beans as conventional farming does, a review of a 22-year farming trial concludes. Published in the July issue of the journal *BioScience*, the report is a review of the Rodale Institute Farming Systems Trial, which is the longest running comparison of organic and conventional farming in the US. 'Organic farming approaches for these crops not only use an average of 30 per cent less fossil energy, but also conserve more water in the soil, induce less erosion, maintain soil quality [better] and conserve more biological resources than conventional farming does,' commented the study's lead author, David Pimentel. The review also found that in drought years, organic corn yields were 22 per cent higher than conventional ones, and nitrogen levels in soils farmed organically increased by up to 15 per cent.



**UK AMBULANCES TO BE FITTED WITH UNSAFE RADIO TECHNOLOGY**

Ambulances in the UK are to be fitted with digital Airwave radios using technology based on the Tetra system now being used by much of the country's police (see 'A Popular revolt', October 2004). In January, however, a report by the Medicines and Healthcare Products Regulatory Agency warned that Airwave radios should be switched off near critical-care or life-support medical equipment. Somewhat inconvenient for vehicles designed specifically for such situations. Previously, a government-commissioned report by former chief scientist Sir William Stewart warned of the dangers of using radio technology that employed frequencies close to 16 hertz. The Stewart report, issued in the year 2000, said such frequencies posed a threat to the body's central nervous system. Airwave radios pulse at 17.6 hertz.

■ For more on Tetra and Airwave, go to [www.theecologist.org/archive\\_detail.asp?content\\_id=330](http://www.theecologist.org/archive_detail.asp?content_id=330)



**ANIMAL-FREE MEAT AT A RESTAURANT NEAR YOU SOON**

US scientists have proposed two new methods of tissue engineering that they believe could result in meat being produced for human consumption without animals being used. 'There would be a lot of benefits from cultured meat,' says University of Maryland doctoral student Jason Matheny. 'For one thing, you could control the nutrients. For example, most meats are high in the fatty acid Omega 6, which can cause high cholesterol and other health problems. With in-vitro meat, you could replace that with Omega 3, which is a healthy fat. Cultured meat could also reduce the pollution that results from raising livestock, and you wouldn't need the drugs that are used on animals raised for meat.'

■ For more information on cultured meat, visit [www.new-harvest.org](http://www.new-harvest.org)

**100**

**Number of safety warnings ignored by staff at Sellafield in the six months before a 20-ton uranium and plutonium leak was discovered in June**

## UP FRONT



### WHAT HAPPENED TO THE RAIN IN SPAIN?

Spain is suffering its worst drought for six decades, not that the average tourist would know it from the lush green golf courses, manicured gardens and crystal-blue swimming pools of their hotels and villas. Nor would the many people returning from the UK's supermarkets with baskets stacked high with Spanish fruit and vegetables.

What British tourists and consumers don't see is that Spain's farmers have been told they can currently irrigate for a maximum of eight minutes a day. So far this year, national losses from failed crops and fodder for grazing animals in Spain are estimated at more than £1 billion.

As a result of the drought, Spain's opposition right-wing Popular Party is calling for the restart of a massive water-transfer scheme that was shelved when the ruling Socialists took power last year. Under the plan, a vast network of dams and water channels was to be built to redirect water from the north of the country to its south (where most of Spain's tourism and farming takes place). The proposals were dropped by the incumbent government as soon as it got into power, following continual protests from people concerned that the dams would cost a fortune, cause the destruction of vast swaths of countryside and not achieve their purpose.

The situation is equally bad in Spain's neighbours, France and Portugal. In Portugal, almost 70 per cent of the country is suffering from severe or extreme drought following the driest conditions for 300 years. Grain harvests in the Alentejo region, directly north of the tourist destination of the Algarve, are 70 per cent down on last year. In France, meanwhile, restrictions on water use have been imposed on more than half of the country.

## FIRST SUPERBUGS, NOW SUPERWEEDS

On the day in July that British newspapers reported the tragic shooting by the police of an innocent Brazilian on London's Underground, another national-security lapse was making headlines: the emergence of the UK's first GM superweed. The superweed was the result of cross-fertilisation between GM oilseed rape and a distantly related plant called charlock. Previously, scientists had dismissed such an eventuality as virtually impossible.

The superweed was discovered by government scientists conducting follow-up research to the three-year field trials of GM crops that ended two years ago. The news came less than a month after the government tried to persuade other European countries to lift their own bans on growing GM oilseed rape. Britain has consistently objected to all of Europe's GM bans.

Scientists from the government research agency the Centre for Ecology and Hydrology (CEH) monitored gene flow from biotech firm Bayer's herbicide-resistant GM oilseed rape to related wild plants

during the field trials. At one test site, the researchers found a GM version of charlock growing the year after the GM trial. The plant was resistant to the weedkiller used in the GM trial and was found to contain the gene inserted into the GM oilseed rape.

Charlock is found alongside oilseed rape across Europe. The CEH's findings suggest that if GM oilseed rape were grown commercially, herbicide-resistant weeds could become widespread. Farmers would then have to use more – and more damaging – weedkillers, with knock-on impacts on the environment. Bayer has lodged two applications for approval to grow GM oilseed rape with the European Commission.

A month earlier, the first international register of GM contamination showed Britain is one of the countries most affected. There have been eight incidents of normal crops, food or animal feed being tainted with GM in Britain since the crops were introduced into the global environment in 1996; only the US, with 11 such incidents has a worse record.





## DIAMONDS NOT BEST FRIENDS

Botswanan Bushmen and supporters of Survival International, the pressure group that campaigns for indigenous people's rights, protest outside the new 'Diamonds' exhibition at London's Natural History Museum (left). According to the protesters, the Bushmen were evicted from their ancestral homes in Botswana's Central Kalahari Game Reserve to make way for the diamond corporation, and sponsor of the exhibition, De Beers. The museum refused the Bushmen's request for the issue of their eviction to be addressed in the exhibition. Survival's director, Stephen Corry, said: 'How can [the Bushmen's] eviction be completely ignored by one of the world's foremost museums without us thinking commercial sponsorship has taken precedence over objective education? It's just another big advert for diamonds at the public's expense, and the museum should be ashamed.'



## CHINESE FIGHT POLICE TO KEEP POLLUTING PLANT SHUT

Thousands of Chinese protesters clashed with police in July as they fought to stop a controversial chemical plant from reopening. The Jingxin Pharmaceutical plant in the town of Xinchang in Zhejiang province was closed after an explosion killed a worker at the beginning of the month. The fatal explosion was the latest in a succession of problems relating to the plant, with locals saying officials have done nothing about chemical wastes from the factory, which they blame for ruining their crops, poisoning the local river and making them sick. One of the demonstrators commented: 'They are making poisonous chemicals for foreigners that the foreigners don't dare produce in their own countries.'

27

**BILLION DOLLARS**  
Estimated cost of storm damage in 2080, according to the Association of British Insurers

### INDIAN COKE BATTLE SWINGS PROTESTERS' WAY

The government of the southern Indian state of Kerala has announced that it will challenge Coca-Cola's alleged abuse of local groundwater supplies in the country's Supreme Court. The allegations relate to the activities of a Coca-Cola bottling plant in the Kerala village, Plachimada.

The decision is a major victory for anti-Coke activists because it means the state is finally siding with the Plachimada village council and massive people's movement that have succeeded in shutting down the bottling plant for the past 16 months. The Plachimada facility is one of the largest bottling plants Coke has in India. The company recently announced that its sales in the country had dropped by 14 per cent in the April-June quarter, traditionally its biggest selling season in India.

■ [www.indiaresource.org](http://www.indiaresource.org)

“The relations with, uh, Europe are important relations, and they've, uh... because, we do share values. And, they're universal values. They're not American values or, you know, European values, they're universal values. And those values – uh – being universal, ought to be applied everywhere.”

George W Bush, at a press conference with European Union dignitaries, Washington, 20 June

# Dear Dr. Tatiana



*I'm a European praying mantis, and I've noticed I enjoy sex more if I bite my lovers' heads off first. It's because when I decapitate them they go into the most thrilling spasms. Somehow they seem less inhibited, more urgent—it's fabulous. Do you find this too? I Like 'Em Headless in Lisbon*



## Dear Like 'Em Headless

Some of my best friends are man-eaters, but, between you and me, cannibalism isn't my bag. I can see why you like it, though. Males of your species are boring lovers. Beheading them works wonders: whereas a headless chicken rushes wildly about, a headless mantis thrashes in a sexual frenzy. Why can't he be that way when he's whole? Well, it's hard to

have wild sex if you're trying to keep your head.

A male praying mantis is in danger during his approach and his departure, but while he's actually on your back – the position in which intact males have sex – you cannot attack him. However, you do not need him intact to have sex with him. If you rip his head off on his approach, his body will go into spasms that allow his genitalia to connect with yours.

Unsurprisingly, though, he doesn't want to have his head removed. Put yourself in his place – you'd be trembling to the tips of your antennae. If you so much as glimpsed a female, you'd freeze. And then you'd start to play grandmother's footsteps. Whenever she looked away, you'd creep closer. Whenever she turned toward you, you'd stand like a statue – 'no, no, don't look at me, I'm just a leaf' – for hours if you had to. The aim? To get close enough to leap on her back. Once on her, you could make love unmolested. But a single false step, and you're at the pearly gates with your head tucked under your arm. In grandmother's footsteps, the stakes don't get higher than that.

Females in more than 80 other species have been caught eating their lovers before, during or after sex. Spiders are the most common culprits, although several other mantises, some scorpions and certain midges also number among the guilty. The midges – tiny flies with big appetites – dispatch their lovers in a particularly horrible way. The female

PHOTOGRAPHS BY PREMAPHOTOS/NATURE PICTURE LIBRARY AND JOSE B. RUIZ/NATURE PICTURE LIBRARY

captures her mate as she would any old prey and plunges her proboscis into his head while they link genitalia. Her spittle turns his innards to soup, which she slurps up, drinking until she's sucked him dry, then dropping his empty shell as casually as a child discards a dull toy. Only his manhood, which breaks off inside her, betrays the fact that this was no ordinary meal.

But perhaps there's an innocent explanation for this behaviour. Perhaps it is a regrettable but genuine mistake. Or perhaps it is a rare psychosis brought on by life in captivity. After all, roughly a third of cannibal species have been seen at it only in the laboratory; perhaps it happens because in a small cage the male can't run and hide.

The European praying mantis, however, is one of the few species that has been watched in both the laboratory and the wild, and cannibalism is equally common in both places. The difference is that laboratory sex takes several hours longer, apparently because the male is too terrified to dismount. (Normally, when the male is done, he drops into the undergrowth, in an attempt to put himself out of reach. Laboratories usually don't feature undergrowth, and the male stays where he is, as if pondering his predicament.)

As for 'I ate my lover by mistake' – well, I can't say accidents never happen. But I know of several spiders with which there can be no doubting the female's intention to take head, not give it. When the female sees a male, she beckons him over and adopts a submissive 'I'm yours' posture – only to pounce on him, wrap him up, and store him in her larder before he can say 'cannibal'.

The trouble is, all too often the male is captured and eaten before he's had a chance to mate. From his point of view, this is a disaster. If he's eaten during foreplay, that's it: his genes get naturally deselected from the population. And from the female's point of view? The habit is not as self-defeating as you might think. For many of these creatures, a male represents a substantial meal. A female garden spider, for example, becomes noticeably plumper with each male she consumes. Her only risk is that she'll be so aggressive toward her suitors that she'll




die as she lived – a grumpy old maid. But that risk is negligible.

So how does a male get close enough to copulate while avoiding capture? Grandmother's footsteps is one technique, but that won't do if he has to tiptoe across a spider web, where every twang on the threads tells the owner where he is. Besides, while a male mantis can always crouch at the end of his partner's back, spider sex is more perilous. A male spider has two penises (called pedipalps), one on each side of his mouth. A female spider has two genital openings on the underside of her belly – you see the difficulty. It is impossible to have sex without getting up close and personal.

The most reliable way to escape unscathed in such circumstances is to disable the female somehow. That's why male *Tetragnatha extensa* spiders are not afraid of sex: they have spurs on their fangs to wedge open females' jaws so they can't bite during copulation. The male crab spider, *Xysticus cristatus*, is a great lover: he goes for bondage, tying the female down (lucky her) before making love. And in *Argyrodes zonatus*, a tiny silver spider that dwells on the webs of much bigger spiders, the males are nature's frat boys. On their heads they have a horn that secretes a powerful drug. They offer the horn to the female to suck so she'll get high and won't be able

to resist their advances. Better hope she doesn't wake up with the munchies...

As for Mr Praying Mantis, he's had a stroke of bad luck. When he's possessed of his head, his brain sends messages to his private parts telling him how to behave. This holds his libido in check until he's in position. When he loses his head, the messages that inhibit sexual behaviour cease and he turns into a sex fiend. The result is that he can copulate when there's almost nothing of him left. Yet although this sounds like proof that he has evolved a spectacular adaptation to being eaten, the 'lose head, have sex' reflex is actually rather common among male insects. Something analogous even happens in humans: throttle a man and like as not he'll get an erection, not from erotic pleasure in dying but because 'down, boy' signals from the brain stop coming. For most fellows, such a reflex is simply a medical curiosity. But most fellows don't have to face Ms Mantis in the bedroom.



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EVERYDAY INSPIRATION



# ONE FOOT IN THE THIRD WORLD

Stuck on a path of long-term economic decline, by 2024 the US will be a has-been country **BY PAUL CRAIG ROBERTS**

In May the Bush economy created 73,000 private sector jobs: 20,000 jobs in construction (primarily for Mexican immigrants), 21,000 in wholesale and retail trade, and 32,500 in healthcare and social assistance. In the public sector, local government added another 5,000.

Not a single one of these jobs produces an exportable good or service. With Americans increasingly divorced from the production of the goods and services that they consume, they have no way to pay for their consumption except

by handing over to foreigners more of their accumulated stock of wealth. The country continues to eat its seed corn.

Only 10 million Americans are classified as 'production workers' in the US Bureau of Labor Statistics non-farm payroll tables. Think about that. The US, with a population approaching 300 million, has only 10 million production workers. That means Americans are consuming the products of other countries' labour. In the 21st century, the US economy has been unable to create

jobs in export- and import-competitive industries. US job growth is confined to non-tradable domestic services. This movement of the American labour force towards Third-World occupations in domestic services has dire implications both for US living standards and for America's status as a superpower.

Economists and policymakers are in denial while the US economy implodes in front of their noses. The US-China Commission, the US government agency set up in 2000 to monitor the changing

ILLUSTRATION BY ADRIAN TEAL

economic relationship between China and the United States, is making a great effort to bring reality to policymakers by holding a series of hearings to explore the depths of American decline. The commissioners got an earful at the 19 May hearings in New York at the foreign-policy think-tank, the Council on Foreign Relations. Technology executive and trade expert Ralph Gomory explained that America's naive belief that offshore outsourcing and globalism are working for the US is based on a 200-year-old trade theory, the premises of which do not reflect the modern world.

Clyde Prestowitz, author of *Three Billion New Capitalists: the great shift of wealth and power to the east*, explained that America's prosperity is an illusion.

Americans feel prosperous because they are consuming \$700 billion annually more than they are producing. Foreigners, principally Asians, are financing US over-consumption, because Americans are paying them by handing over their markets, jobs and wealth. My former colleague at the magazine *Business Week*, Bill Wolman, explained the consequences for US workers of suddenly facing direct labour-market competition from hundreds of millions of Chinese and Indian workers. Towards the end of the 20th century three developments came together that are rapidly moving high productivity, high value-added jobs that pay well away from the US to Asia: the collapse of world socialism, which vastly increased the supply of labour available to US capital; the rise of the internet; and the extraordinary international mobility of US capital and technology.

First-world capital is rapidly deserting first-world labour in favour of Third-World labour, which is much cheaper because of its abundance and low cost of living. Formerly, the US's high real incomes were protected from cheap

foreign labour, because US labour worked with more capital and better technology, which made it more productive. Today, however, US capital and technology move to cheap labour, or cheap labour moves via the internet to US employment. The reason economic development in China and some Indian cities is so rapid is because it is fuelled by the offshore location of first-world corporations.

Prestowitz is correct that the form that globalism has taken is shifting income and wealth from the first world to the Third World. The rise of Asia is coming at the expense of the American worker.

Global competition could have developed differently. US capital and technology could have remained at home, protecting US incomes with high productivity. Asia would have had to raise itself up without the inside track of first-world offshore producers. Asia's economic development would have been slow, laborious and characterised by a gradual rise of Asian incomes towards US standards, not by a jarring loss of American jobs and incomes to Asians. Instead, US corporations chose to drive earnings and managerial bonuses by substituting cheap Asian labour for American labour.

American businesses' short-run profit maximisation plays directly into the hands of thoughtful Asian governments with long-run strategies. As Prestowitz informed the US-China Commission, China now has more semi-conductor plants than the US. Short-run goals are reducing US corporations to brand names with sales forces marketing foreign-made goods and services.

By substituting foreign for American workers, US corporations are destroying their domestic markets. As American jobs in the higher-paying manufacturing and professional services are given to Asians, and as American schoolteachers and

nurses lose their occupations to foreigners imported under work visa programmes, American purchasing power dries up, especially once all the home equity is spent, credit cards are maxed out and the dollar loses value to the Asian currencies.

The dollar is receiving a short-term respite as a result of the rejection of the EU constitution by France and the Netherlands. The fate of the euro, which rose so rapidly in value against the dollar in recent years, is uncertain, thus possibly cutting off one avenue of escape from the over-produced US dollar.

However, nothing is in the works to halt America's decline and to put the economy on a path of true prosperity. In January 2004, I told a televised conference of the Washington-based think-tank the Brookings Institution that the US would be a Third-World economy within 20 years. I was projecting the economic outcome of the US labour force being denied first-world employment and forced into the low-productivity occupations of domestic services. Considering the vast excess supplies of labour in India and China, Asian wages are unlikely to rapidly approach existing US levels. Therefore, the substitution of Asian for US labour in tradable goods and services is likely to continue.

As US students seek jobs immune from outsourcing, engineering enrolments are declining. The exit of so much manufacturing is destroying the supply chains that make manufacturing possible. Asia will not give it back its economy once America has lost it; it will not play the 'free-trade' game and let its labour force be displaced by cheap American labour. Offshore outsourcing is dismantling the ladders of America's fabled upward mobility. The US labour force already has one foot in the Third World. By 2024 the US will be a has-been country.

■ Paul Craig Roberts is co-author of *The Tyranny of Good Intentions*

America's naive belief that offshore outsourcing and globalism are working for the US is based on a 200-year-old trade theory, the premises of which do not reflect the modern world

COMMENTS

# WHO WAS KILLED BY COCK ROBIN?

Across the pond, the news that one of the US's most iconic birds might be helping to spread the West Nile virus is about as welcome as suggesting Jesus was a communist  
BY MALCOLM TAIT

Who killed Cock Robin? Or more accurately, who killed Mock Robin? This is the question US virologists have been asking recently, and the answer could be critical to the understanding of the spread of that enigmatic disease that has started colonising various parts of the world, West Nile virus. The trouble is, vital though the answer may be, there are some who don't like the question in the first place. And when people don't like a question, it's usually got a back-story.

This particular story began several centuries ago when the first hopeful and undoubtedly homesick colonists set foot on the shores of North America to begin life in their brave new world. Now, brave new worlds are all well and good, but you can't visit them without bringing some nostalgic baggage from your old world. You left a town called Plymouth, so why not call your new landing place Plymouth, too? For good measure, you decide to name the land New England, and get rid of anyone already there who doesn't look much like the folks back home. And when a friendly little bird turns up and you notice its red breast, you smile and think of those distant fields and woods, and immediately call it a robin. Even though it acts like a thrush, is the same size and shape as a thrush, and, in fact, is a thrush... Well, it's a robin now.

The American robin became very popular across the continent as the colonialists took hold and spread. They listened to its sweet song, they caged it to listen to it at close range, they shot and ate it and enjoyed its tasty flesh. Then, like the rest of us, they changed tack and admired it as it called from woodlands and wandered around the garden looking for earthworms. Today, it's the state

bird not only of Michigan, but also of Connecticut. Oh, and Wisconsin, too. Only three birds represent more states than the American robin, which is still a very popular friend.

So the news that it might be partly responsible for the spread of West Nile virus has not gone down very well. To date, some 200 species of bird have been found to contain the virus, which is then transmitted to humans by mosquitoes in search of fresh blood. In most cases, the symptoms are flu-like and pass through the system relatively harmlessly. But the virus can kill: 667 Americans have died from it so far. Many believe that crows are the main hosts of the virus, but recent research carried out in Connecticut has shown that no less than 40 per cent of virus-carrying mozzies also carry blood containing DNA of the iconic robin; whereas only 1 per cent had been feeding on crows. In fact, crows, which started dying in great numbers when the disease first struck, are now making a comeback. Could it be that they've developed an immunity? Or could the virus have subtly changed?

The news of the robin's complicity with West Nile virus swept the nation. Even though other common birds, such as the house sparrow, gray catbird and mourning dove, were also implicated in the study, it was the beloved robin that hit the headlines. Local and national press picked up on the story at the end of July, and a spokesman for the government agency the Centers for Disease Control and Prevention was wheeled out to make a comforting statement: 'I'd be surprised if the American robin would

be very important,' he said. 'I wouldn't jump to the conclusion that crows are not important. If this study analyses mosquitoes where there are lots of robins but no crows, that could be misleading.' And all this before he'd even seen the Connecticut scientists' data.

Now, of course, it could be that the Connecticut data is based in some way on a poor sample (although similar evidence is emerging from a New York-based study, too), but to dismiss it out of hand before you've even seen it is staggering. Any lead in a medical mystery that kills so many is surely worth investigating thoroughly before making pronouncements. And be in no doubt that this is a mystery: no one's sure exactly which species of

To dismiss evidence out of hand before you've even seen it is staggering

mosquito is the main carrying culprit, and there are some who think that the spread of the disease might not even be due to mosquitoes at all.

But then, perhaps this nervousness is unsurprising. It's all due to that back-story. After all, to think that a deadly virus that arrived from overseas and quickly spread across the land might be hosted by a bird that welcomed the Pilgrim Fathers... Well, that could make for a very uncomfortable metaphor.

■ Malcolm Tait's new book, *The Countryside Companion*, is published by Robson Books this month

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# WITH NO ONE ON THEIR SIDE

The Bush administration's new alternative to the Kyoto agreement is yet further proof of its ideological aversion to multilateralism **BY HOWARD FRIEL**

In its 2001 report, the Intergovernmental Panel on Climate Change estimated that global temperatures would increase, mostly due to man-made greenhouse gases, by anything from 1.4° to 5.8° centigrade between 1990 and 2100. In October 2003, the journal *Nature* estimated that the Kyoto Protocol would suppress the average global increase in temperatures by no more than 0.28° centigrade by the year 2050. Thus, even assuming that the Kyoto targets will be met by the protocol's 140 signatory countries (an unlikely proposition) they will do little to stop or slow the earth's warming. It is clear that more needs to be done beyond Kyoto without delay.

This might appear to explain to some why the Bush administration, after renouncing the Kyoto accord during the G8 summit in early July, has announced that it is entering a 'post-Kyoto era' and that it will participate in an alternative climate accord called the Asia-Pacific Partnership for Clean Development and Climate. The US and the other countries involved – Japan, Australia, China, India and South Korea – pledged to share technological advances to control emissions, but did not agree to mandatory emissions cuts.

The actual purpose of Washington's announcement, however, had nothing to do with transcending or bettering the UN climate-change framework, of which the Kyoto Protocol is a component. But it was consistent with other Bush initiatives that favour US unilateralism at the expense of important UN-based international agreements.

The most obvious of these is the US-led invasion of Iraq. The invasion was planned, threatened and initiated outside the formal procedures and requirements

that have been established at the UN and under international law to handle such things. Instead, the Bush administration invented its 'coalition of the willing'. The result is the Iraq disaster we are all witnessing.

Likewise, on 18 July Bush announced an agreement with India to sell it civilian nuclear technology, even though US domestic law currently prohibits such sales because India is not a signatory to the Nuclear Non-Proliferation Treaty – it currently makes

and deploys nuclear weapons in violation of the treaty.

According to Reuters, the US-India bilateral agreement 'upends decades-old non-proliferation rules'. Experts have said that the agreement will make it more difficult to enforce non-proliferation rules as applied to Iran and North Korea. The result is likely to be more nuclear proliferation and less security.

The Bush move to narrowly align itself with a small group of nations on global warming outside the established UN framework fits this pattern. Its objective is not to remedy the inadequacies of Kyoto, but to circumvent anticipated motions to strengthen the UN framework on climate change at a critically important conference in Montreal this autumn.

Some good advice about the newly announced US-Asia track on global warming was given by Lord Robert May of Oxford, the president of the Royal Society, who on 28 July said: 'The science points

to the need for a Herculean effort to make massive cuts in the amount of greenhouse gases that we pump into the atmosphere. So, while this encouraging new deal may play a role in this, it will only be part... of the solution... We have serious concerns that the apparent lack of targets in this deal means that there is no sense of what it is ultimately trying to achieve or the urgency of taking action to combat climate change. And the developed countries involved with this agreement

must not be tempted to use it as an excuse to avoid tackling their own emissions. All eyes should be on the United Nations Framework Convention on Climate Change in Montreal at the end of November.'

We already know that Kyoto will do little to stop global warming. Its objectives were weakened by the US

to the point of ineffectuality in pre-Kyoto negotiations throughout the 1990s. As negotiations begin in Montreal to establish a post-Kyoto climate plan, the world has no time left to indulge yet again US unilateralism.

■ Howard Friel is co-author with Richard Falk of *The Record of the Paper: how the New York Times misreports US foreign policy* (Verso, 2004)

The US aims not to remedy the inadequacies of Kyoto, but to circumvent anticipated motions to strengthen the UN framework on climate change in Montreal this autumn

## COMMENTS

# FARMING MATTERS

When people take part in the seasonal and cyclical activities of growth they are more able to put things into perspective – to make decisions that are governed by life-sustaining principles over and above financial incentive BY RACHEL FRANCIS

Often, on a Saturday morning, my nine-year-old son is up before seven o'clock, eager to go and help on the family farm before breakfast. He goes whatever the weather. This is voluntary. He is neither expected nor paid to help. He loves it. Isaac *believes* in farming. He has little concept of the complexities of global markets, agribusiness, politics or subsidies. However, there is no question in his mind that the land and the animals need to be tended in all weathers, and that farm produce feeds the community.

During his first year at school Isaac's teacher noted that he spent 'too much' time looking out of the window when he should have been 'concentrating'. Isaac told me, with a child's candour, that he was 'just wishing that he was out there'. I found myself wondering whether the curriculum was not a little narrow, and a little inflexible in its concept of education.

My children often question their education in relation to the rest of their lives on our farm.

Finn: 'Why did we have to plant potatoes in *pots* at school?'

Angus: 'Why can you only learn things in classrooms?'

Isaac: 'Why do we have to go to school when we need to help with the shearing?'

Finn: 'Why do you have to take *money* to the school harvest festival?' (The school doesn't know what to do with marrows and cabbages.)

I cannot answer these questions adequately in defence of modern education.

Farming is important. The outdoor world is where life happens. Growing food is a very real part of life. It is a simple wisdom understood by children (at least those who are lucky enough to remain in touch with such things).

Archaeologists have found evidence of agricultural activities dating back more than 10,000 years. It is most likely that farming began in a very small and rather

insignificant way: nomadic hunter-gatherers began to take a few animals along with them for milk/ eggs/ meat/ furs; or perhaps they spread the seeds of edible plants over an area and returned to the same spot the following year; and this meant that there was less hardship and loss of life over the winter months.

The beginnings of agriculture represented a shift in consciousness. The world was no longer perceived simply as an all-providing and all-taking away Eden, but rather as a garden in which humanity can take an active part, thus affecting its own destiny.

In its simplest form this change in human consciousness and activity was a creative change. It improved the overall chance of survival. It was sustainable. To use the natural fertility of the soil, the natural capacity for growth and regeneration, the sunlight and the rain in order to promote survival is, and always has been, sustainable.

Over thousands of years the earth and humanity evolved and changed, and people developed ever more sophisticated methods of producing food and fuel and other materials from the land. I can imagine how, over the course of time, those who invested their blood, sweat and tears into agriculture developed a sense of ownership – first, with the produce from the land, and later of the land itself.

At some point the urge to work hard and to maximise personal survival and to stake a claim in personal endeavour actually becomes a destructive process. It overrides the sense of earth or cosmos or even just community, and it begins to ignore the interdependence of all life. It is perhaps ironic that our fierce drive to survive in 'the marketplace' is becoming our nemesis: 'successful' farmers in UK, like so many others, compete with their neighbours, cheat their neighbours, scabble for government subsidies, plunder earth's resources in order to grow more and earn more, parade their wealth in the form of ever bigger and shinier and oil-consuming vehicles. This is the survival of the fittest at its most surreal. This is not sustainable farming; this is agribusiness.

There is so much that has been cast aside which has to do with our relationship with the earth. Returning to a way of life which is balanced and which supports the earth is not going backwards; developing impressive, but ultimately destructive technology is not going forwards.

As a society we have to change in order to become environmentally, socially and financially sustainable. More than this, we need to 'feel' sustained. Somehow we have to pick out the good things in life and go for them – the things that make us fulfilled, happy, healthy... the things that have soul. Sustainable farming is a

Returning to a way of life which is balanced and which supports the earth is not going backwards; developing impressive, but ultimately destructive technology is not going forwards

part of this. When people take part in the seasonal and cyclical activities of growth, when they learn to work with the earth, to understand the source of life, then they are more able to put things into perspective – to make decisions that are governed by life-sustaining principles over and above financial incentive.

Rural communities everywhere across the world offer a window to a more natural way of life, while city and community farms offer people from urban walks of life the chance to participate in this closeness to the earth. Education should help to develop our affinity with nature and the basics of life; it should never alienate us from our source.

I sit at my computer, filling out data for the Department of Environment, Food and Rural Affairs. Every cow has a number. 'Friendly' has just had a calf. Its number is UK362695 600192. I record the date of birth, number of mother, breed, colour, place of birth. I record every movement on and off the farm. I have a couple of other forms to fill in this week, and accounts to be kept up to date, and I mustn't forget animal health records...

I remind myself that we have a real farm beyond this computer screen: a beautiful farm where food grows and wildlife is abundant and children play; a sustainable and sustaining farm that links us – vitally – to the earth.

■ Rachel Francis, together with her husband and children, runs a small family farm in west Devon

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## COMMENTS

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### ART NOT OIL 2005 A TRUER PORTRAIT OF AN OIL COMPANY?

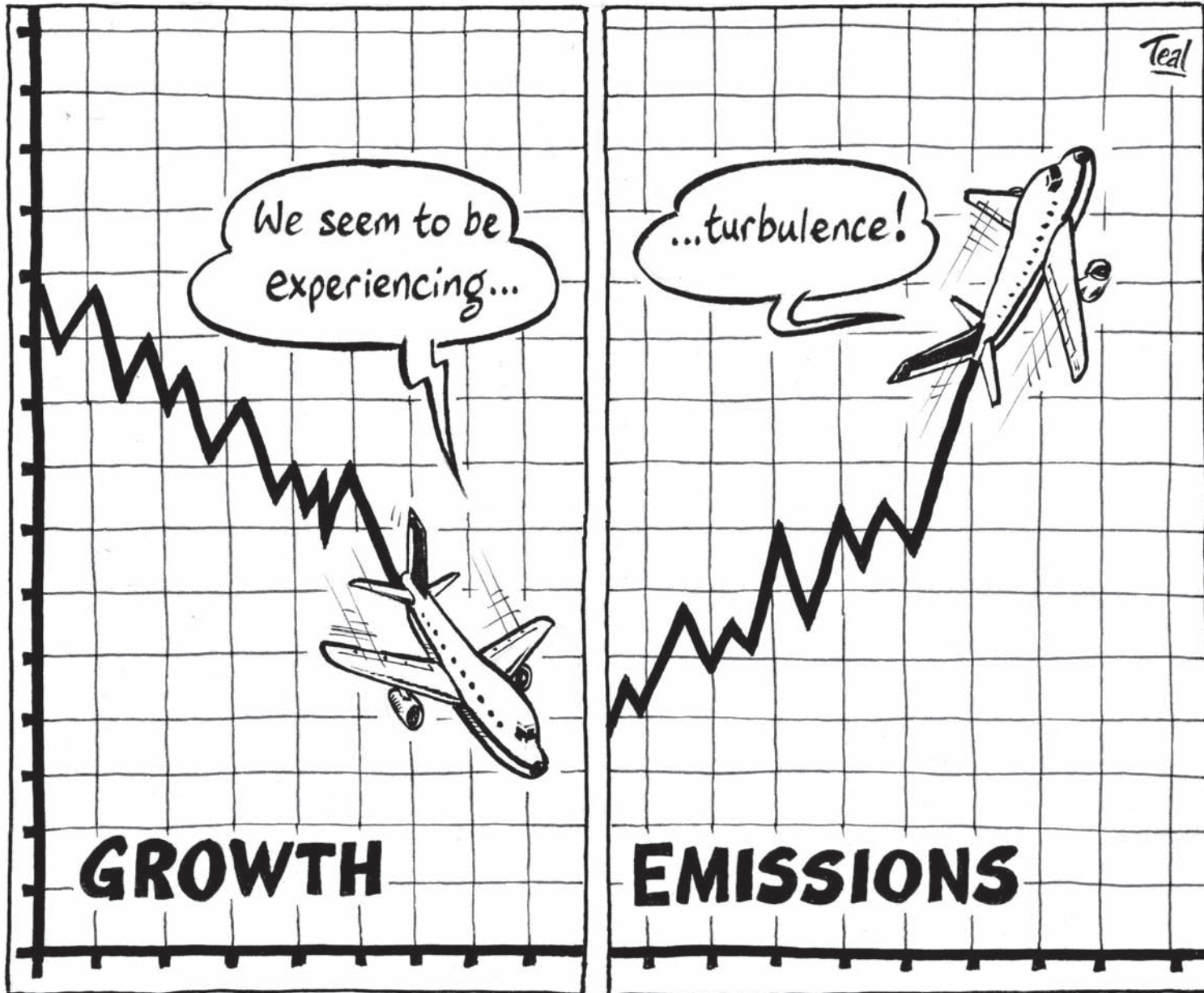


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[www.artnotoil.org.uk](http://www.artnotoil.org.uk) [www.nationalpetroleumgallery.org.uk](http://www.nationalpetroleumgallery.org.uk)



## ON A WING AND A PRAYER

The government insists that Britain needs to massively expand its airports to cope with a rapidly growing aviation industry. In actual fact, the sector's boom years could be over

BY DAVID WEST

A total of 32 million people flew in and out of UK airports in 1970. By 2002, according to the government, that number had soared to 189 million. By 2020, 460 million passengers per year are predicted to use British airports. In 2001, aviation accounted for 2 per cent of the country's GDP. Sounds like business is booming.

No wonder then, that the Department of Transport's white paper on aviation, published on 16 December 2003, called for up to three new runways at Stansted

Airport, with the first to be operational by 2012; a new runway at Heathrow (where the construction of Terminal 5 is well under way), or at Gatwick if the Heathrow proposals breach current air-quality limits; and a third new runway at Birmingham.

How, then, can we explain the problems plaguing the airline companies themselves? For sure the industry took a heavy blow with the attacks in the US in September 2001: in the immediate wake of 9/11, British Airways (BA) cut 7,000 staff, Virgin Atlantic 1,200, BMI British

Midland 600 and Go-Ahead 700. (Exact figures for the knock-on effect on jobs in aviation support industries are harder to come by.) In the US things got so bad that by March 2003 senator Charles E. Schumer had called for a provision in the war budget to save the country's airlines from bankruptcy.

But even prior to 9/11, many airlines were planning cutbacks as they felt the pinch of rising oil prices and passenger numbers already declining with the global economic slowdown. And four

ILLUSTRATION BY ADRIAN TEAL

years after 9/11, matters have improved little for the major air carriers: it was only this April that passenger numbers returned to pre-9/11 levels. Giovanni Bisignani, chief executive of the International Air Transport Association, forecast that the global airline industry faced losses of \$5.5 billion in 2005, bringing the industry's total financial shortfall since 9/11 to a staggering \$40 billion.

How can the industry remain viable in such a climate? Act like BA, perhaps. In May the company announced that pre-tax profits had risen to £415m for the last financial year, up from £230m. How? Could it be because BA has cut a total of 13,000 staff since 9/11? Certainly the appointment of Willie Walsh as chief executive has only fuelled fears of further cost-cutting measures and redundancies. Walsh hauled Aer Lingus from the brink of insolvency with ruthless job cutting that saw the airline shed one third of its workforce, and drew criticism from Irish prime minister Bertie Ahern for his rough handling of the company.

But it is the budget airlines that have enjoyed the strongest resurgence in passenger numbers. Low-cost airlines presently account for 12 per cent of UK flights, and in the year ending in April 2005 saw a 30 per cent rise in flights. Yet even for the budget end of the business, there are caveats. EasyJet scaled back its fleet-expansion plans in March as its percentage of seats filled dropped by 2.7 per cent in February. A month later Ryanair announced it would no longer allow staff to charge their mobile phones at the office; that followed decisions to make staff pay for their own uniforms, crew meals and training. At the end of July, budget carrier EU Jet declared it was suspending all flights and operations.

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And whereas BAA, the company that operates Gatwick, Heathrow and Stansted, announced in June that UK passenger numbers were up 4.3 per cent on the same month one year earlier, they are now sure to fall following the recent terrorist attacks in London. Added to which, airlines are still dealing with the ever-rising price of oil, which is likely to drive ticket prices up ever higher. Furthermore, BAA's April announcement that it plans to invest £6.8 billion in Heathrow, Gatwick and Stansted over the next 10 years came the day after Boeing declared a 14 per cent drop in first-quarter earnings.

So while the government's expansionist plans for aviation may be based upon predicted increases in air travel, they could equally be part of a wider initiative to support continued economic growth by encouraging spending. Chancellor Gordon Brown has been criticised for his optimistic predictions for the continued rate of growth of the UK economy, which he needs if his books are to balance. In this light, the huge injection of money into

the airline industry fits Brown's agenda of priming economic growth by using government policy to encourage spending in the private sector.

If this is the government's agenda it faces stiff opposition from environmental groups like AirportWatch and Friends of the Earth. Air travel is a major contributor to climate change; aeroplanes produce not just carbon dioxide, but nitrogen oxides that become

the greenhouse gas ozone in the troposphere (note: ozone is desirable in the stratosphere, but harmful in the troposphere.) In the UK, airlines pay no tax on their fuel – despite their high emission levels. Any increase in air travel, particularly on the scale envisioned in the white paper, would inevitably be

accompanied by an increase in pollution, and environmentalists have declared their intention to fight the government and BAA's plans in the courts.

BA chairman Martin Broughton addressed the environmental impact of his industry in a speech on 3 July, stating that aviation accounts for only 2-3 per cent of global carbon dioxide emissions. What Broughton did not mention was any of the other greenhouse gases released by airplanes, such as nitrogen oxides.

Broughton also announced that BA has joined a group formed by British air carriers called Sustainable Aviation. Predictably, Sustainable Aviation opposes fuel duty for airlines and supports the introduction of a system that would allow carriers to trade emissions quotas between each other. This is akin to president Bush's proposal for carbon-credit trading: an idea intended to free the US from having to reduce carbon emissions by simply buying credits from other countries that have not caused as much pollution as their quotas 'allow'.

Sustainable Aviation sets out its targets on its website. They include 'improving fuel efficiency and CO<sub>2</sub> emissions by 50 per cent per seat kilometre by 2020 compared with 2000 levels', and 'reducing nitrogen oxide emissions by 80 per cent over the same period'. While reducing emissions per kilometre is undeniably desirable there is no target given for overall emission levels, and if the government's white paper figures for growth in the airline industry are correct, CO<sub>2</sub> emissions will approach 18 million tons in 2020.

Given these figures, how can the UK government reconcile its commitment to slowing climate change with encouraging the continued expansion of the airline industry? And more fundamentally, how does it plan to grow an industry that is dependent on cheap fuel when the price of oil is inexorably rising?

■ David West is a freelance journalist

## BEHIND THE LABEL

# CLEARASIL DEEP CLEANSING 3 IN 1 WASH

Britons spend millions on dubious acne treatments every year. BY PAT THOMAS

### INGREDIENTS

Aqua, PPG-15 stearyl ether, glycerine, stearyl alcohol, cetyl betaine, salicylic acid, distearyldimonium chloride, sodium lauryl sulfate, oxidised polyethylene, cetyl alcohol, alcohol, steareth-21, sodium chloride, behenyl alcohol, PPG-30, steareth-2, parfum, menthol, disodium EDTA, BHT, limonene, benzyl salicylate, linalool, hexyl cinnamal



The social stigma attached to pimples has meant that for years manufacturers have had a ready-made market of anxious and not very savvy young consumers willing to shell out vast sums of cash on products that promise to get rid of them. In recent years this market has grown considerably as the prevalence of adult acne has increased. Today, nearly half of all women over 30 and a quarter of all men suffer transient problems with acne. This is a major boon for the therapeutic skincare market.

Most acne treatments contain either a harsh anti-microbial like benzoyl peroxide or a chemical exfoliant like salicylic acid as their primary active ingredient. Clearasil's 3 in 1 face wash is no exception, making use of the skin-peeling effects of the latter. Like all acne skin washes, it is a somewhat schizophrenic mixture of heavy-duty detergents and solvents that remove the skin's natural oils, and synthetic skin conditioners designed to repair some of the damage the detergents and solvents inflict on the skin. In addition, it contains a range of well-known skin irritants, two potential carcinogens and five fragrance ingredients that are among the most commonly reported contact allergens in the EU. These fragrance ingredients so consistently produce skin problems that they must now be listed separately on the label.

Clearasil was first introduced to acne-troubled teenagers in the 1960s. Owned by Crookes Healthcare, the UK division of Boots Healthcare International, it is the global leader

in anti-acne treatments. Boots purchased the brand from the US giant Procter & Gamble for £190m in 2000. It was a profitable move. Last year in the US alone acne remedies generated \$286.3m worth of sales, and Clearasil accounted for nearly 10 per cent of these. In the UK, medicated skincare products are worth around £77m annually, and Clearasil boasts a 17 per cent share of this market.

But while people all over the world continue to buy acne treatments, there is little evidence that they do much good. Generally speaking, acne begins when hormones stimulate oil production or a genetic predisposition produces excess shedding of skin cells. Both oil and skin cells can clog follicles, thus creating an ideal climate for the bacterium *Propionibacterium acnes* to proliferate. The waste products of *P acnes* are what eventually cause the inflammation we know as pimples.

Over-the-counter acne treatments are not cures. In fact, there is no known cure for acne. In teenagers the condition is usually transient, settling down with hormones. In adults, a more complex set of factors, including food allergies, stress and, in women, cyclical hormone changes and cosmetic use, are usually to blame.

■ Pat Thomas is the author of several books on the environment and health, including *Under the Weather: how the weather and climate affect our health* (Fusion Press), and *Cleaning Yourself to Death: how safe is your home?* and *Living Dangerously: are everyday toxins making you sick?* (both published by Newleaf)

## BEHIND THE LABEL

INGREDIENTS	PURPOSE	ADVERSE EFFECTS
<b>PPG-15 stearyl ether</b>	Emollient; skin-conditioning agent.	A contact allergen; toxic to aquatic organisms.
<b>Glycerine</b>	Solvent; humectant; lubricant.	Can dry the skin, making it more vulnerable to damage and to absorbing other harmful chemicals in the mix. Glycerine can be processed from plants or animals.
<b>Stearyl alcohol</b>	Emollient; moisturiser; stabiliser.	Can cause allergies or contact dermatitis.
<b>Salicylic acid</b>	Anti-microbial; chemical exfoliant.	Skin dryness; irritation; increases skin sensitivity to sunlight (photosensitisation); a penetration enhancer; alters skin structure, allowing other chemicals to penetrate deeper into the skin and, eventually, the bloodstream.
<b>Distearyldimonium chloride</b>	Surfactant; antistatic agent.	Unknown, commonly used in fabric softeners.
<b>Sodium lauryl sulfate</b>	Detergent; foaming agent; surfactant; denaturant.	Denatures (removes natural oils from) the skin, leaving it vulnerable to infection and dryness; irritating and damaging to the eyes; a penetration enhancer; potential carcinogen.
<b>Oxidised polyethylene</b>	Thickener; synthetic wax.	Poorly researched; in the form of 'microbeads', this waxy substance acts as an exfoliant and a potential skin irritant; supermarkets use it, in the form of E914, as a synthetic wax to coat fruits and vegetables, even though it is considered harmful to ingest.
<b>Cetyl alcohol</b>	Emollient; emulsifier; thickener.	Skin irritation; dermatitis.
<b>Alcohol</b>	Solvent.	Dry skin; contact dermatitis.
<b>Behenyl alcohol, Limonene, Benzyl salicylate, Linalool, Hexyl cinnamal</b>	Synthetic fragrance; thickeners; stabilisers.	Skin irritation; according to the EU Scientific Committee on Cosmetic Products and Non-Food Products, this ingredient is among the 24 most frequently reported contact allergens found in cosmetics.
<b>Parfum</b>	Fragrance.	Parfum is often made up of dozens of synthetic chemicals that can cause allergic reactions, including asthma, skin irritation and central nervous system disruption (eg, headache, mood swings, depression, forgetfulness); artificial musks and phthalates – common fragrance ingredients – are hormone-disrupting chemicals.
<b>Disodium EDTA</b>	Antioxidant; chelating agent.	Irritating to eyes and skin; a penetration enhancer; in animals, it is cytotoxic (kills cells) and genotoxic (damages cellular DNA); may be contaminated with ethylene oxide and/or dioxane, both human carcinogens; in the environment, it acts like a magnet for heavy metals concentrating them in aquatic life and, via the water cycle, humans.

### ALTERNATIVES

Common acne (*acne vulgaris*) is most common in teenagers, but it can affect individuals of all ages. It is largely self-limiting: that is, it eventually clears up whether you do anything about it or not. Essentially, it is a skin-ecology issue. Normal skin bacteria like *P. acnes* perform an important function in stopping colonisation by more harmful bacteria. To prevent acne, it is not necessary to kill all the bacteria on the face, but rather to keep numbers from getting out of hand. Regular face washing, enough sleep, regular moderate sun exposure and a diet low in junk food are likely to be just as effective as harsh skin cleaners. If you do want to use a cleanser, try natural tea-tree-based soaps, which are ideal, or products from the manufacturers listed below:

#### Akamuti

[www.akamuti.co.uk](http://www.akamuti.co.uk)

#### Aubrey

[www.aubrey-organics.com](http://www.aubrey-organics.com)  
(0800 0851697 in the UK)

#### Aveda

[www.aveda.com](http://www.aveda.com)

#### Burts Bees

[www.myburtsbees.co.uk](http://www.myburtsbees.co.uk)

#### Dr Hauschka

[www.drhauschka.co.uk](http://www.drhauschka.co.uk)

#### Earthbound Organics

[www.earthbound.co.uk](http://www.earthbound.co.uk)

#### Green People

[www.greenpeople.co.uk](http://www.greenpeople.co.uk)

#### Primavera Aromatherapy

[www.primavera.co.uk](http://www.primavera.co.uk)

#### Pure Nuff Stuff

[www.purenuffstuff.co.uk](http://www.purenuffstuff.co.uk)



When the Arabs invaded North Africa in the seventh century, they created an intricate web of trading routes that stretched from the Mediterranean across the Sahara to black Africa. Enormous camel caravans, with as many as 25,000 animals, and loaded with everything from ivory, indigo and ostrich feathers to gold, slaves and salt, would make the long trek back and forth across the vast blankness of the desert. This ancient trading system began to fall apart in the 19th century. The abolition of slavery deprived traders of their main commodity, and the creation of new and artificial states – Algeria, Libya, Mali, Niger and Chad – brought with it border posts that made it harder for the camel caravans to follow their original routes. What remained was outpaced and outloaded by the advent of mechanised transport. But not completely. Each winter, as has happened for almost 1,500 years, a few hundred camels and their Hausa and Tuareg owners make the long journey from south Niger to the drier north. They bring vegetables and millet to trade with the Tubu and Kanouri – people who live at the Fachi and Bilma oases and mine rock salt, which the southerners then take the many hundreds of miles back home to use in their animals' feed.



# SALT CARAVANS OF

Few countries have a more hostile environment than Niger, as has belatedly been brought to the world's attention by the famine that currently threatens so many lives there. But one resource that Niger is blessed with is salt, which, just as was the case 1,500 years ago, is transported around the country by Hausa and Tuareg camel caravans

# NIGER

Photo story by  
**Kate Eshelby**

Each day begins at first light and continues uninterrupted, and with the assistance of the stars, late into the night. Alhassane, the caravan leader, knows this harsh terrain intimately: he has been making the 2,300-kilometre round trip since he was a child. It takes six weeks. Back at his southern Niger home of Madaoua, he will spend the summer months herding goats, sheep and camels, and growing millet and vegetables in his garden. In winter, however, he travels north with clothes, tomatoes, beans, millet, sugar and tea to exchange for salt.



## NIGER

The Tubu and Kanouri people work in mines located in remote places deep in the desert. The reddish-coloured salt is extracted by evaporation, pounded in giant mortars, and then pressed into moulds to form a cone shape or smaller, flat cakes, before being wrapped in palm leaves ready for transportation. Salt is no longer worth its weight in gold (as it was at the height of the caravan trade), but it remains extremely important: the rock salt mined in the Sahara is believed far superior to sea salt, as it contains trace elements essential to the health of the herders' animals, to whose fodder it is added at the end of the long journey.



## NIGER



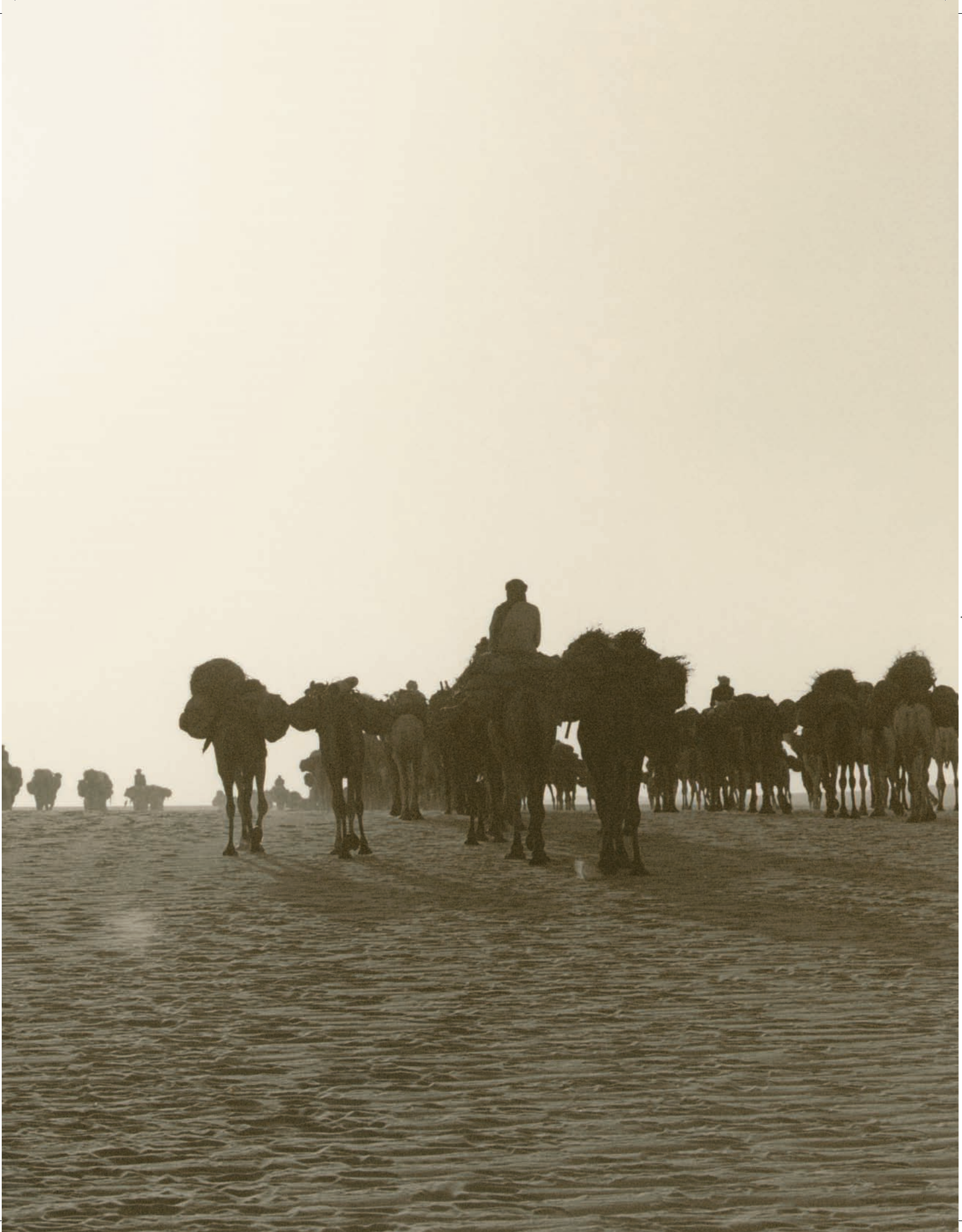
Just as now, Niger suffered severe droughts in the 1970s, and many families lost all their animals. During this emergency the country's government began to provide trucks, and the age-old tradition of salt caravans almost died out. But in 1986 caravans began to set off across the desert again; although the trucks continued, traditions do not die easily. Alhassane explains: 'The pastoralists prefer the caravan salt. Perhaps the lorry drivers don't choose good salt or it smells of petrol.' Camels are also cheaper to run than trucks: they don't need petrol or spare parts, they can carry heavy loads and are ideal for the desert because they survive on little water.



At the height of the caravan trade the oases were important stopping points for stocking up on water, conducting business and catching up with old friends and acquaintances. Since the caravans have declined, however, many of the former trading towns are now in ruins. Nonetheless, those that survive still show the amazing results humans can achieve when they work hard at cultivation and treat the environment well.

**Soon the last stretch of the Trans-Saharan highway will be completed in Mauritania, and there will be a continuous road from Tangiers in Morocco to Dakar in Senegal. Another road is planned to run straight across the desert in the north of Niger to the port of Algiers. These roads bring faster trade, a wider selection of goods and pollution. No one knows if the ancient salt trade, which for centuries has sustained people and their animals without harming the environment in which they live and work, can survive.**





## ASPARTAME

# Aspartame

Aspartame is the most controversial food additive in history. The most recent evidence, linking it to leukaemia and lymphoma, has added substantial fuel to the ongoing protests of doctors, scientists and consumer groups who allege that this artificial sweetener should never have been released onto the market and that allowing it to remain in the food chain is killing us by degrees. **PAT THOMAS** REPORTS

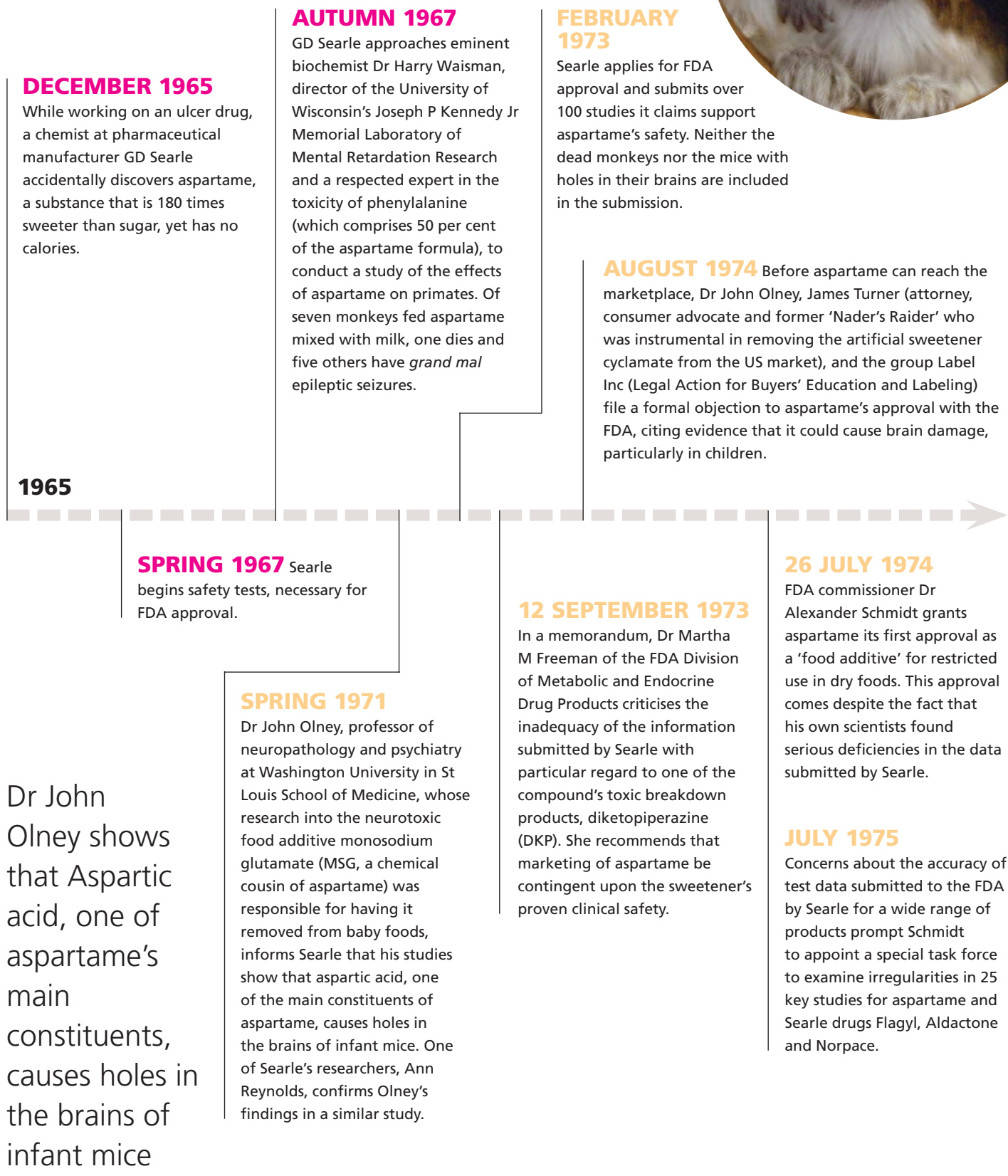
Once upon a time, aspartame was listed by the Pentagon as a biochemical warfare agent. Today it's an integral part of the modern diet. Sold commercially under names like NutraSweet and Canderel, aspartame can be found in more than 5,000 foods, including fizzy drinks, chewing gum, table-top sweeteners, diet and diabetic foods, breakfast cereals, jams, sweets, vitamins, prescription and over-the-counter drugs. This means that there is a good chance that you and your family are among the two thirds of the adult population and 40 per cent of children who regularly ingest this artificial sweetener.

Because it contains no calories, aspartame is considered a boon to health-conscious individuals everywhere; and most of us, if we think about it at all, think it is safe. But independent scientists say aspartame can produce a range of disturbing adverse effects in humans, including headaches, memory

loss, mood swings, seizures, multiple sclerosis and Parkinson's-like symptoms, tumours and even death.

Concerns over aspartame's toxicity meant that for eight years, the US Food and Drug Administration (FDA) denied it approval, effectively keeping it off the world market. This caution was based on compelling evidence, brought to light by numerous eminent scientists, litigators and consumer groups, that aspartame contributed to serious central nervous system damage and had been shown to cause cancer in animals. Eventually, however, political muscle, won out over scientific rigour, and aspartame was approved for use in 1981 (see timeline for details).

The FDA's about-turn opened the floodgates for aspartame's swift approval by more than 70 regulatory authorities around the world. But, as the remarkable history of the sweetener shows, the clean bill of health given to it by government regulators – whose *raison d'être* should be to protect the public from harm – is simply not worth the paper it is printed on.



Dr John Olney shows that Aspartic acid, one of aspartame's main constituents, causes holes in the brains of infant mice

## ASPARTAME

### 5 DECEMBER 1975

Searle agrees to an inquiry into aspartame safety concerns. Searle withdraws aspartame from the market pending its results. The sweetener remains off the market for nearly 10 years while investigations into its safety and into Searle's alleged fraudulent testing procedures are ongoing. However, the inquiry board does not convene for another four years.

**26 JANUARY 1977** While the grand jury investigation is underway, Sidley & Austin, the law firm representing Searle, begins recruitment negotiations with Samuel Skinner, the US attorney in charge of the investigation. Skinner removes himself from the investigation and the case is passed to William Conlon.

**1 AUGUST 1977** The Bressler Report is released. It focuses on three key aspartame studies conducted by Searle. The report finds that in one study 98 of the 196 animals died but weren't autopsied until later dates, making it impossible to ascertain the actual cause of death. Tumours were removed from live animals and the animals placed back in the study. Many other errors and inconsistencies are noted. For example, a rat was reported alive, then dead, then alive, then dead again. Bressler comments: 'The question you have got to ask yourself is: why wasn't greater care taken? Why didn't Searle, with their scientists, closely evaluate this, knowing full well that the whole society, from the youngest to the elderly, from the sick to the unsick... will have access to this product.' The FDA creates yet another task force to review the Bressler Report. The review is carried out by a team at the FDA's Center for Food Safety and Applied Nutrition and headed by senior scientist Jacqueline Verrett.

### JULY 1976

The FDA forms a new task force, headed by veteran inspector Jerome Bressler, to further investigate irregularities in Searle's aspartame studies uncovered by the original task force. The findings of the new body will eventually be incorporated into a document known as the Bressler Report.

1975

**24 MARCH 1976** The FDA task force completes its 500-page report on Searle's testing procedures. The final report notes faulty and fraudulent product testing, knowingly misrepresented product testing, knowingly misrepresented and 'manipulated' test data, and instances of irrelevant animal research in all the products reviewed. Schmidt says: '[Searle's studies were] incredibly sloppy science. What we discovered was reprehensible.'

**10 JANUARY 1977** FDA chief counsel Richard Merrill formally requests the US Attorney's office to begin grand jury proceedings to investigate whether indictments should be filed against Searle for knowingly misrepresenting findings and 'concealing material facts and making false statements' in aspartame safety tests. This is the first time in the FDA's history that it requests a criminal investigation of a manufacturer.

**1 JULY 1977** Samuel Skinner leaves the US Attorney's office and takes a job with Searle's law firm. Conlon takes over Skinner's old job.



### 8 MARCH 1977

Searle hires prominent Washington insider Donald Rumsfeld as its new CEO to try to turn the beleaguered company around. A former member of Congress and defence secretary in the Ford administration, Rumsfeld brings several of his Washington colleagues in as top management.

The FDA describes the science of aspartame's manufacturer as 'incredibly sloppy', saying: 'What we discovered was reprehensible'

## ASPARTAME

### 28 SEPTEMBER 1977

The FDA publishes a report exonerating Searle of any wrongdoing in its testing procedures. Jacqueline Verrett will later testify to the US Senate that her team was pressured into validating data from experiments that were clearly a 'disaster'.

Searle CEO Donald Rumsfeld vows to 'call in his markers' and use political rather than scientific means to get the FDA on side

### 20 JANUARY 1981

Ronald Reagan is sworn in as president of the US. Reagan's transition team, which includes Rumsfeld, nominates Dr Arthur Hull Hayes Jr to be the new FDA commissioner.



**1978** The journal *Medical World News* reports that the methanol content of aspartame is 1,000 times greater than most foods under FDA control. In high concentrations methanol, or wood alcohol, is a lethal poison.

**1979** In spite of the uncertainties over aspartame's safety in the US, aspartame becomes available, primarily in pharmaceutical products, in France. It is sold under the brand name Canderel and manufactured by the food corporation Merisant.

**30 SEPTEMBER 1980** The FDA's PBOI votes unanimously against aspartame's approval, pending further investigations of brain tumours in animals. The board says it 'has not been presented with proof of reasonable certainty that aspartame is safe for use as a food additive'.

1977

**8 DECEMBER 1977** Despite complaints from the Justice Department, Conlon stalls the grand jury prosecution for so long that the statute of limitations on the aspartame charges runs out and the investigation is dropped. Just over a year later Conlon joins Searle's law firm, Sidley & Austin.

**1 JUNE 1979** The FDA finally establishes a public board of inquiry (PBOI), comprising three scientists whose job it is to review the objections of Olney and Turner to the approval of aspartame and rule on safety issues surrounding the sweetener.

**1980** Canderel is now marketed throughout much of Europe (but not in the UK) as a low-calorie sweetener.



Despite complaints from the Justice Department, federal attorney William Conlon stalls a grand jury prosecution of Searle for so long that the statute of limitations runs out and the investigation is dropped

**JANUARY 1981** Rumsfeld states in a Searle sales meeting that he is going to make a big push to get aspartame approved within the year. Rumsfeld vows to 'call in his markers' and use political rather than scientific means to get the FDA on side.

## ASPARTAME

### 21 JANUARY 1981

One day after Reagan's inauguration, Searle re-applies to the FDA for approval to use aspartame as a food sweetener.

### 19 MAY 1981

Arthur Hull Hayes Jr, appoints a five-person commission to review the PBOI's decision. Three of the five FDA scientists on it advise against approval of aspartame, stating on the record that Searle's tests are unreliable and not adequate to determine the safety of aspartame. Hayes installs a sixth member on the commission, and the vote becomes deadlocked.

### OCTOBER 22, 1981

The FDA approves aspartame as a tabletop sweetener and for use in tablets, breakfast cereals, chewing gum, dry bases for beverages, instant coffee and tea, gelatines, puddings, fillings, dairy-product toppings and as a flavour enhancer for chewing gum.



### 8 JULY 1983

Aspartame is approved for use in carbonated beverages and syrup bases in the US and, three months later, Britain. Before the end of the year Canderel tablets are launched in the UK. Granular Canderel follows in 1985.

### 15 OCTOBER 1982

The FDA announces that Searle has filed a petition for aspartame to be approved as a sweetener in carbonated beverages, children's vitamins and other liquids.

1981

### MARCH 1981

An FDA commissioner's panel is established to review issues raised by the PBOI.

1982 The aspartame-based sweetener Equal, manufactured by Merisant, is launched in the US.



15 JULY 1981 Hayes ignores the recommendations of his own internal FDA team, overrules the PBOI findings and gives initial approval for aspartame to be used in dry products on the basis that it has been shown to be safe for its proposed uses.

Three out of five FDA scientists on a special commission advise against approval of aspartame, stating on the record that Searle's tests are unreliable and not adequate to determine the safety of aspartame

1983 Searle attorney Robert Shapiro gives aspartame its commercial name, NutraSweet. The name is trademarked the following year. Shapiro later becomes president of Searle. He eventually becomes president and then chairman and CEO of Monsanto, which will buy Searle in 1985.



The NutraSweet Company

MONSANTO



## ASPARTAME

### 8 AUGUST 1983

James Turner, on behalf of himself and the Community Nutrition Institute, and Dr Woodrow Monte, Arizona State University's director of food science and nutritional laboratories, file petitions with the FDA objecting to aspartame approval based on possible serious adverse effects from the chronic intake of the sweetener. Monte also cites concern about the chronic intake of methanol associated with aspartame ingestion.

**MARCH 1984** Public complaints about the adverse effects of aspartame begin to come in. The FDA requests that the US agency the Centers for Disease Prevention and Control (CDC) begins investigations of a select number of cases of adverse reactions to aspartame.

**2 NOVEMBER 1984** The CDC review of public complaints relating to aspartame culminates in a report, *Evaluation of Consumer Complaints Related to Aspartame Use*, which reviews 213 of 592 cases and notes that re-challenge tests show that sensitive individuals consistently produce the same adverse symptoms each time they ingested aspartame. The reported symptoms include: aggressive behaviour, disorientation, hyperactivity, extreme numbness, excitability, memory loss, loss of depth perception, liver impairment, cardiac arrest, seizures, suicidal tendencies and severe mood swings. The CDC nevertheless concludes that aspartame is safe to ingest. On the same day that the CDC exonerates aspartame, Pepsi announces that it is dropping saccharin and adopting aspartame as the sweetener in all its diet drinks. Others quickly follow suit.

### AUTUMN 1983

The first carbonated beverages containing aspartame go on sale in the US.



1983

### SEPTEMBER 1983

Hayes resigns as FDA commissioner under a cloud of controversy about his taking unauthorised rides aboard a General Foods jet (General Foods was and is a major purchaser of aspartame). He serves briefly as provost at New York Medical College, and then takes a position as senior scientific consultant with Burston-Marsteller, the chief public relations firm for both Searle and Monsanto.

**30 MAY 1984** The FDA approves aspartame for use in multivitamins.



**JULY 1984** A study by the state of Arizona Department of Health into aspartame is published in the *Journal of Applied Nutrition*. It determines that soft drinks stored at elevated temperatures promote more rapid deterioration of aspartame into poisonous methanol.

**17 FEBRUARY 1984** The FDA denies Turner and Monte's requests for a hearing, noting that aspartame's critics had not presented any unresolved safety questions. Regarding aspartame's breakdown components, the FDA says that it has reviewed animal, clinical and consumption studies submitted by the sweetener's manufacturer, as well as the existing body of scientific data, and concludes that 'the studies demonstrated the safety of these components'.

On the same day that the US agency the CDC exonerates aspartame, Pepsi announces it is adopting it as the sweetener in all its diet drinks

## ASPARTAME

UPI reports that 10 federal officials involved in approving aspartame have taken private sector jobs linked to the product's manufacture

### 1 OCTOBER 1985

Monsanto, the producer of recombinant bovine growth hormone, genetically engineered soya beans, the pesticide Roundup and many other industrial and agricultural chemicals, purchases Searle for \$2.7 billion.

### 16 OCTOBER 1986

Turner files another citizen's petition, this time concerning the risk of seizures and eye damage from aspartame. The petition argues that medical records of 140 aspartame users show them to have suffered from epileptic seizures and eye damage after consuming products containing the sweetener and that the FDA should ban aspartame as an 'imminent hazard to the public health'.

### 28 NOVEMBER 1986

The FDA approves aspartame for non-carbonated frozen or refrigerated concentrates and single-strength fruit juice, fruit drinks, fruit-flavoured drinks, imitation fruit-flavoured drinks, frozen stock-type confections and novelties, breath mints and tea beverages.



### 2 JANUARY 1987

An FDA report on adverse reactions associated with aspartame states the majority of the complaints about aspartame, now numbering 3,133, refer to neurological effects.

1985

### 21 APRIL 1986

The US Supreme Court, headed by Justice Clarence Thomas, a former Monsanto attorney, refuses to consider arguments from the Community Nutrition Institute and other consumer groups that the FDA has not followed proper procedures in approving aspartame, and that the liquid form of the artificial sweetener may cause brain damage in heavy users of low-calorie soft drinks.

### DECEMBER 1986

The FDA declares aspartame safe for use as an inactive ingredient, provided labelling meets certain specifications.

1987 NutraSweet's aspartame patent runs out in Europe, Canada and Japan. More companies are now free to produce aspartame sweeteners in these countries.

### 12 OCTOBER 1987

United Press International, a leading global news-syndication organisation, reports that more than 10 federal officials involved in the decision to approve aspartame have now taken jobs in the private sector that are linked to the aspartame industry.

21 NOVEMBER 1986 The FDA denies Turner's new petition, saying: 'The data and information supporting the safety of aspartame are extensive. It is likely that no food product has ever been so closely examined for safety. Moreover, the decisions of the agency to approve aspartame for its uses have been given the fullest airing that the legal process requires.'





**3 NOVEMBER 1987** A US Senate hearing is held to address the issue of aspartame safety and labelling. The hearing reviews the faulty testing procedures and the 'psychological strategy' used by Searle to help ensure aspartame's approval. Other information that comes to light includes the fact that aspartame was once on a Pentagon list of prospective biochemical-warfare weapons.

Numerous medical and scientific experts testify as to the toxicity of aspartame. Among them is Verrett, who reveals that, while compiling its 1977 report, her team was instructed not to comment on or be concerned with the overall validity of the studies. She states that questions about birth defects have not been answered. She also states that increasing the temperature of the product leads to an increase in production of DKP, a substance shown to increase uterine polyps and change blood cholesterol levels. Verrett comments: 'It was pretty obvious that somewhere along the line, the bureau officials were working up to a whitewash.'

**20 JULY 1990** *The Guardian* publishes a major investigation of aspartame and delivers to government officials 'a dossier of evidence' that draws heavily on the transcripts of the Bressler Report and demands that the government review the safety of aspartame. No review is undertaken. *The Guardian* is taken to court by Monsanto and forced to apologise for printing its story.

*The Guardian*



**1992** NutraSweet signs agreements with Coca-Cola and Pepsi stipulating that it is their preferred supplier of aspartame.

1987

**1989** The FDA has received more than 4,000 complaints from consumers about adverse reactions to the sweetener.

**14 OCTOBER 1989**

Dr HJ Roberts, director of the Palm Beach Institute for Medical Research, claims that several recent aircraft accidents involving confusion and aberrant pilot behaviour were caused by ingestion of products containing aspartame.



It is revealed during a Senate hearing that aspartame was once on a Pentagon list of prospective biochemical-warfare weapons

**1991** Britain's National Institutes of Health publishes *Adverse Effects of Aspartame: January '86 through December '90*, a bibliography of 167 studies documenting adverse effects associated with aspartame.

**30 JANUARY 1992**

The FDA approves aspartame for use in malt beverages, breakfast cereals, and refrigerated puddings and fillings and in bulk form (in large packages like sugar) for tabletop use. NutraSweet markets these bulk products under the name 'NutraSweet Spoonful'.

**14 DECEMBER 1992**

NutraSweet's US patent for aspartame expires, opening up the market for other companies to produce the substance.

## ASPARTAME

**19 APRIL 1993** The FDA approves aspartame for use in hard and soft candies, non-alcoholic flavoured beverages, tea beverages, fruit juices and concentrates, baked goods and baking mixes, and frostings, toppings and fillings for baked goods.



1993

**APRIL 1995** Consumer activist, and founder of anti-aspartame group Mission Possible, Betty Martini uses the US's Freedom of Information Act to force the FDA to release an official list of adverse effects associated with aspartame ingestion. Culled from 10,000 consumer complaints, the list includes four deaths and more than 90 unique symptoms, a majority of which are connected to impaired neurological function. They include: headache; dizziness or problems with balance; mood change; vomiting and nausea; seizures and convulsions; memory loss; tremors; muscle weakness; abdominal pains and cramps; change in vision; diarrhoea; fatigue and weakness; skin rashes; deteriorating vision; joint and musculoskeletal pain.

By the FDA's own admission, fewer than 1 per cent of those who have problems with something they consume ever report it to the FDA. This means that around 1 million people could have been experiencing adverse effects from ingesting aspartame.

**27 JUNE 1996**

The FDA removes all restrictions from aspartame use, and approves it as a 'general-purpose sweetener', meaning that aspartame can now be used in any food or beverage.

**NOVEMBER 1996**

Drawing on data compiled by the US National Cancer Institute's Surveillance, Epidemiology and End Results programme, which collects and distributes data on all types of cancer, Olney publishes peer-reviewed research in the *Journal of Neuropathology and Experimental Neurology*. It shows that brain-tumour rates have risen in line with aspartame consumption and that there has been a significant increase in the conversion of less deadly tumours into much more deadly ones.

**28 FEBRUARY 1994**

Aspartame now accounts for the majority (75 per cent) of all the complaints in the US adverse-reaction monitoring system. The US Department of Health and Human Services compiles a report that brings together all current information on adverse reactions attributed to aspartame. It lists 6,888 complaints, including 649 reported by the CDC and 1,305 reported by the FDA.

**12 JUNE 1995**

The FDA announces it has no further plans to continue to collect adverse reaction reports or monitor research on aspartame.

**DECEMBER 1996**

The results of a remarkable study conducted by Dr Ralph G Walton, professor of clinical psychology at Northeastern Ohio Universities, are revealed. Commissioned by the hard-hitting US national news programme *60 Minutes*, it sheds some light on the absurdity of aspartame-safety studies. Walton reviewed 165 separate studies published in the preceding 20 years in peer-reviewed medical journals. Seventy-four of the studies were industry-funded, all of which attested to aspartame's safety. Of the other 91 non-industry funded studies, 84 identified adverse health effects. Six of the seven non-industry funded studies that were favourable to aspartame were from the FDA, which has a public record of strong pro-industry bias. To this day, the industry-funded studies are the ones that are always quoted to the press and in official rebuttals to aspartame critics. They are also the studies given the greatest weight during the approval process and in official safety reviews.

John Olney shows that brain-tumour rates have risen in line with aspartame consumption and that there has been a significant increase in the conversion of less deadly brain tumours to much more deadly ones

## ASPARTAME

### 10 FEBRUARY 1998

Monsanto petitions the FDA for approval of a new tabletop sweetener called Neotame. It is around 60 times sweeter than aspartame and up to 13,000 times sweeter than sugar. Neotame is less prone to breaking down in heat and in liquids than aspartame because of the addition of 3,3-dimethylbutyl, a poorly studied chemical with suspected neurotoxic effects. Strengthening the bond between aspartame's main constituents eliminates the need for a health warning directed at people suffering from PKU.

## Sainsbury's

**OCTOBER 1998** The UK's Food Commission publishes two surveys on sweeteners. The first shows that several leading companies, including St Ivel, Müller and Sainsbury's, have ignored the legal requirement to state 'with sweeteners' next to the name of the product. The second reveals that aspartame not only appears in 'no-sugar added' and 'light' beverages but also in ordinary non-dietetic drinks because it's three times cheaper than ordinary sugar.

**20 JUNE 1999** An investigation by *The Independent on Sunday* reveals that aspartame is made using a genetic engineering process. Aspartame component phenylalanine is naturally produced by bacteria. The newspaper reveals that Monsanto has genetically engineered the bacteria to make them produce more phenylalanine. Monsanto claims that the process had not been revealed previously because no modified DNA remains in the finished product, and insists that the product is completely safe; though scientists counter that toxic effects cannot be ruled out in the absence of long-term studies.

A Monsanto spokeswoman says that while aspartame for the US market is often made using genetic engineering, aspartame supplied to British food producers is not. The extent to which US brands of low-calorie products containing genetically engineered aspartame have been imported into Britain is unclear.

An investigation by *The Independent on Sunday* reveals that aspartame is made using a genetic engineering process

1998

### 13 MAY 1998

Independent scientists from the University of Barcelona publish a landmark study clearly showing that aspartame is transformed into formaldehyde in the bodies of living specimens (in this case rats), and that this formaldehyde spreads throughout the specimens' vital organs, including the liver, kidneys, eyes and brain. The results fly in the face of manufacturers' claims that aspartame does not break down into formaldehyde in the body, and bolster the claims of aspartame critics that many of the symptoms associated with aspartame toxicity are caused by the poisonous and cumulative effects of formaldehyde.

### 8 FEBRUARY 1999

Monsanto files a petition with the FDA for approval of the general use of Neotame.



### MAY 2000

Monsanto, under pressure – not least from the worldwide resistance to genetically manipulated food and ongoing lawsuits – sells NutraSweet to JW Childs Associates, a private-equity firm comprised of several former Monsanto managers, for \$440m. Monsanto also sells its equity interest in two European sweetener joint ventures, NutraSweet AG and Euro-Aspartame SA.

### 10 DECEMBER 2001

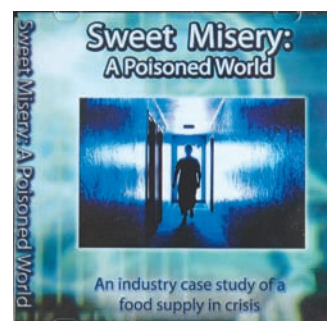
The UK's Food Standards Agency requests that the European Commission Scientific Committee on Food conducts an updated review of aspartame. The committee is asked to look carefully at more than 500 scientific papers published between 1988 and 2000 and any other new scientific research not examined previously.

## ASPARTAME

**9 JULY 2002** The FDA approves the tabletop and general use of Neotame. The 'fast-track' approval raises eyebrows because, historically, the FDA takes at least 10 years to approve food additives. Neotame is also approved for use in Australia and New Zealand, but has yet to be approved in the UK.

**19 FEBRUARY 2003** Members of the European Parliament's Environment, Public Health and Consumer Policy Committee approve the use of sucralose (see page 50) and an aspartame-acesulfame salt compound (manufactured in Europe by the aspartame-producing Holland Sweetener Company and sold under the name Twinsweet), agreeing to review of the use of both in three years' time. At the same time, a request by European greens that the committee re-evaluate the safety of aspartame and improve the labelling of aspartame-containing products is rejected.

**MAY 2004** The feature-length documentary *Sweet Misery* is released on DVD (see [www.soundandfuryproductions.com](http://www.soundandfuryproductions.com)). Part-documentary, part-detective story, it includes interviews with people who have been harmed by aspartame, as well as credible testimony from advocates, doctors, lawyers and long-time campaigners, including James Turner, HJ Roberts and renowned neurosurgeon Dr Russell Blaylock. (UK orders: Namaste Publishing, [info@namastepublishing.co.uk](mailto:info@namastepublishing.co.uk).)



**SEPTEMBER 2004** US consumer group the National Justice League files a \$350m class action lawsuit against the NutraSweet Corporation (the current owner of aspartame products), the American Diabetes Association and Monsanto. Some 50 other defendants have yet to be named, but mentioned throughout the lawsuit is the central role of Donald Rumsfeld in helping to get aspartame approved through the FDA. The plaintiffs maintain that this litigation will prove how deadly aspartame is when it is consumed by humans. Little progress has been made so far in bringing the action to court.

2002

**10 DECEMBER 2002** The European Commission Scientific Committee on Food publishes its final report on aspartame. The 24-page report largely ignores independent research and consumer complaints, relying instead on frequently cited articles in books and reviews put together by employees or consultants of aspartame manufacturers. When independent research is cited, it is generally refuted with industry-sponsored data. An animal study showing aspartame's disruption of brain chemistry, a human study linking aspartame to neurophysiological changes that could increase seizure risk, another linking aspartame use with depression in individuals susceptible to mood disorder, and two others linking aspartame ingestion with headaches are all dismissed. The report's conclusion amounts to a single sentence: 'The committee concluded that... there is no evidence to suggest that there is a need to revise the outcome of the earlier risk assessment or the [acceptance daily intake] previously established for aspartame.' As with the FDA, there are concerns about the neutrality of some of the committee's members and their links with the International Life Sciences Institute (ILSI), an industry group that funds, among other things, research into aspartame. ILSI members include Monsanto, Coca-Cola and Pepsi.

**JULY 2005**

The Ramizzini Institute in Bologna, a non-profit, private institution set up to research the causes of cancer, releases the results of a very large, long-term animal study into aspartame ingestion. Its study shows that aspartame causes lymphomas and leukaemia in female animals fed aspartame at doses around 20 milligram per kilogram of body weight, or around half the accepted daily intake for humans.

**MARCH 2005** The NutraSweet Company reopens its plant in Atlanta, Georgia, (dormant since 2003) in order to meet increased demand for its sweetener. Aspartame, sold commercially as NutraSweet, Equal, Equal-Measure, Spoonful, Canderel and Benevia, is currently available in more than 100 countries and used in more than 5,000 products by at least 250 million people every day. Worldwide, the aspartame industry's sales amount to more than \$1 billion yearly. The US is the primary consumer.

# ASPARTAME REACTIONS: A HIDDEN EPIDEMIC

Aspartame has been linked to a host of devastating central nervous system disorders

When aspartame was approved for use, Dr HJ Roberts, director of the Palm Beach Institute for Medical Research, had no reason to doubt the FDA's decision. 'But my attitude changed,' he says, 'after repeatedly encountering serious reactions in my patients that seemed justifiably linked to aspartame.' Twenty years on, Roberts has coined the phrase 'aspartame disease' to describe the wide range of adverse effects he has seen among aspartame-guzzling patients.

He estimates: 'Hundreds of thousands of consumers, more likely millions, currently suffer major reactions to products containing aspartame. Today, every physician probably encounters aspartame disease in everyday practice, especially among patients with illnesses that are undiagnosed or difficult to treat.'

As a guide for other doctors, Roberts, a recognised expert in difficult diagnoses, has published a lengthy series of case studies, *Aspartame Disease: an ignored epidemic* (Sunshine Sentinel Press), in which he meticulously details his treatment of 1,200 aspartame-sensitive individuals, or 'reactors', encountered in his own practice. Following accepted medical procedure for detecting sensitivities to foods, Roberts had his patients remove aspartame from their diets. With nearly two thirds of reactors, symptoms began to improve within days of removing aspartame, and improvements were maintained as long as aspartame was kept out of their diet.

Roberts' case studies parallel much of what was revealed in the FDA's report on adverse reactions to aspartame – that toxicity often reveals itself through central nervous system disorders and compromised immunity. His casework shows that aspartame toxicity can mimic the symptoms of and/or worsen several diseases that fall into these broad categories (see the box above).

Case studies, especially a large series like this, address some of the issues surrounding real-world use in a way that laboratory studies

## CONDITIONS MIMICKED BY ASPARTAME TOXICITY

- multiple sclerosis
- Parkinson's disease
- Alzheimer's disease
- fibromyalgia
- arthritis
- multiple chemical sensitivity
- chronic fatigue syndrome
- attention deficit disorder
- panic disorder
- depression and other psychological disorders
- lupus
- diabetes and diabetic complications
- birth defects
- lymphoma
- Lyme disease
- hypothyroidism

never can; and the conclusions that can be drawn from such observations aren't just startling, they are also potentially highly significant. In fact, Roberts believes that one of the major problems with aspartame research has been the continued over-emphasis on laboratory studies. This has meant that the input of concerned independent physicians and other interested persons, especially consumers, is 'reflexively discounted as "anecdotal"'. Many of the diseases listed by Roberts fall into the category of medicine's 'mystery diseases' – conditions with no clear aetiology and few effective cures. And while no one is suggesting that aspartame is the single cause of such diseases, Roberts' research suggests that some people diagnosed with, for example, multiple sclerosis, Parkinson's or chronic fatigue syndrome may end up on a regimen of potentially harmful drugs that could have been avoided if they simply stopped ingesting aspartame-laced products.

Roberts' research suggests that some people diagnosed with, for example, multiple sclerosis, Parkinson's or chronic-fatigue syndrome may end up on a regimen of potentially harmful drugs that could have been avoided if they simply stopped ingesting aspartame

## ASPARTAME

# ASPARTAME'S TOXIC CONTENTS

Aspartame is made up of three chemicals: the amino acids aspartic acid and phenylalanine, and methanol. The chemical bond that holds these constituents together is fairly weak. As a result, aspartame readily breaks down into its component parts in a variety of circumstances: in liquids; during prolonged storage; when exposed to heat in excess of 86° Fahrenheit (30° centigrade); and when ingested. These constituents further break down into other toxic by-products, namely formaldehyde, formic acid and aspartylphenylalanine diketopiperazine (DKP).

Manufacturers argue that the instability of aspartame is irrelevant since its constituents are all found naturally in food. This is only partially true and ignores the fact that in food amino acids like aspartic acid and phenylalanine are bound to proteins, which means that during digestion and metabolism they are released slowly into the body. In aspartame, these amino acids are in an unbound or 'free' form that releases greater amounts of these chemicals into the system much more quickly. Similarly, the methanol present in natural foods like fruits, for example, is bound to pectin and also has a co-factor, ethanol, to mediate some of its effects. No such chemical 'back-stops' exist in aspartame.

According to neuroscientist Russell Blaylock, the effect

of aspartame's breakdown components on brain function is central to its known adverse effects. Like monosodium glutamate (MSG) and L-cysteine, an amino acid found in hydrolysed vegetable protein, aspartame is what is known as an 'excitotoxin' – a chemical transmitter that allows brain cells to communicate. Blaylock has written a book about them, *Excitotoxins: the taste that kills*, and says: 'Even a minute over-concentration of these chemicals causes the brain cells to become so over-excited that they very quickly burn themselves out and die.'

While aspartame manufacturers say aspartame cannot penetrate the blood-brain barrier – the tightly-walled membrane that keeps toxins from reaching the brain, Blaylock counters that a number of factors make the blood-brain barrier more porous, including exposure to pesticides, hypoglycaemia, all immune diseases (such as lupus and diabetes), Alzheimer's and Parkinson's, strokes (including silent strokes) and a whole range of medical drugs. Under these conditions, ingesting aspartame-laced foods may cause a spike in the level of excitotoxins that directly reach the brain, thus increasing the likelihood of adverse effects. Each of aspartame's main constituents is a known neurotoxin capable of producing a unique array of adverse effects.

### PHENYLALANINE

The essential amino acid phenylalanine comprises 50 per cent of aspartame. In people with the genetic disorder, phenylketonuria (PKU) the liver cannot metabolise phenylalanine, causing it to build up in the blood and tissues. Chronically high levels of phenylalanine and some of its breakdown products can cause significant neurological problems, which is why foods and beverages containing aspartame must carry a warning for PKU sufferers.

But according to Dr HJ Roberts, sensitivity to aspartame is not limited to PKU sufferers. PKU carriers – people who inherited

the gene for the disorder but do not themselves have the condition (around 2 per cent of the general population) – are also more prone to adverse effects. In Roberts' data there is also a high incidence of aspartame reactions among the close relatives of patients who cannot tolerate aspartame. Furthermore, there is evidence that ingesting aspartame, especially along with carbohydrates, can lead to excess levels of phenylalanine in the brain even among those not affected by PKU.

Although phenylalanine is sometimes used as a treatment for depression, excessive amounts in the brain can cause

levels of the mood regulator serotonin to decrease, making depression more serious or likely. Build-up of phenylalanine in the brain can also worsen schizophrenia or make individuals more susceptible to seizures. Moreover, decrease in serotonin levels can result in carbohydrate craving. This could explain aspartame's lack of effectiveness as a diet aid.

### DKP

DKP is a breakdown product of phenylalanine that forms when aspartame-containing liquids are stored for prolonged periods. In animal experiments it has produced brain tumours, uterine polyps and changes in

blood cholesterol. Before the FDA approved aspartame, the amount of DKP in our diets was essentially zero. So no claim of DKP's safety can be accepted as genuine until good-quality long-term studies have been performed. No such studies have been done.

### ASPARTIC ACID

Aspartic acid (also known as aspartate) is a non-essential amino acid that comprises 40 per cent of aspartame. In the brain, it functions as a neurotransmitter – facilitating the transfer of information from one nerve cell (neuron) to another. Both human and animal experiments have demonstrated

a significant spike in blood-plasma levels of aspartate after the administration of aspartame in liquids. Too much aspartate in the brain produces free radicals, unstable molecules that damage and kill brain cells.

Humans are five times more sensitive to the effects of aspartic acid (as well as glutamic acid, found in MSG) than rodents, and 20 times more sensitive than monkeys, because we concentrate these excitatory amino acids in our blood at much higher levels and for a longer period of time. Aspartic acid has a cumulative harmful effect on the endocrine and reproductive systems. Several animal experiments have shown that excitotoxins can penetrate the placental barrier and reach the foetus.

In addition, as levels of aspartic acid rise in the body so do levels of the key neurotransmitter norepinephrine (also known as noradrenaline), a 'stress hormone' that affects parts of the human brain where attention and impulsivity are controlled. Excessive norepinephrine is associated with symptoms such as anxiety, agitation and mania.

#### **METHANOL**

Methanol (wood alcohol) comprises 10 per cent of aspartame. It is a deadly poison that is liberated from aspartame at temperatures in excess of 86° Fahrenheit (30° centigrade) – for instance, during storage or inside the human body. The US Environmental Protection Agency considers methanol a 'cumulative poison due to the low rate of excretion once it is absorbed', meaning that even small amounts in aspartame-containing foods can build up over time in the body.

The most well known problems from methanol poisoning are vision disorders, including

misty or blurry vision, retinal damage and blindness. Other symptoms include headaches, tinnitus, dizziness, nausea, gastrointestinal disturbances, weakness, vertigo, chills, memory lapses, numbness and shooting pains in the extremities behavioural disturbances, and neuritis. The EPA tightly controls methanol exposure, allowing only very minute levels to be present in foods or in environmental exposures. But Blaylock says: 'The level allowed in NutraSweet is seven times the amount that the EPA will allow anyone else to use.'

#### **FORMALDEHYDE**

The methanol absorbed from aspartame is converted to formaldehyde in the liver. Formaldehyde is a neurotoxin and known carcinogen. It causes retinal damage and birth defects, interferes with DNA replication, and has been shown to cause squamous-cell carcinoma, a form of skin cancer, in animals. Several human studies have found that chronic, low-level formaldehyde exposure has been linked with a variety of symptoms, including headaches, fatigue, chest tightness, dizziness, nausea, poor concentration and seizures.

#### **FORMIC ACID**

Formic acid is a cumulative poison produced by the breakdown of formaldehyde. It concentrates in the brain, kidneys, spinal fluid and other organs, and is highly toxic to cells. Formic acid can lead to accumulation of excessive acid in the body fluids – a condition known as acidosis. The small amounts of formic acid derived from the methanol absorbed from aspartame may or may not be dangerous; there are no human or mammalian studies to enlighten us.

## **ASPARTAME**

### **TIME FOR ACTION**

The story of aspartame is the story of the triumph of corporate might over scientific rigour. It shines a spotlight on the archaic and unbalanced procedure for approving food additives.

We ingest food additives daily, yet their approval does not require the same scientific thoroughness as drug approval; and, unlike drugs, there is no requirement for surveillance of adverse effects that crop up once the additive is in use.

Approval does not involve looking at what people are already eating and whether the proposed substance will interact with other additives. Nor does it take into account whether the additive exacerbates damage caused by other aspects of the modern lifestyle (for instance, the neurological damage caused by pesticide ingestion or exposure). Nor does it look for subtle chronic effects (for instance, the gradual build-up of methanol in the body with regular aspartame ingestion).

There are other problems. Most studies into aspartame are animal studies, which are notoriously difficult to relate to humans. So why bother performing them in the first place? The answer is, manufacturers and regulators use animal research as a double-edged sword. If an animal study reveals no evidence of harm, the manufacturer can use it to support its case. If it reveals harm, however, the manufacturer is free to flip-flop into the argument that the results of animal studies are inconclusive in relation to humans. Faced with inconclusive evidence regulators will always err on the side of the manufacturer, who has after all demonstrated proper bureaucratic procedure by funding and submitting its animal tests for consideration.

The approval process for any substance that humans put in their mouths on a daily basis should be based on solid human data and on the precautionary principle when such data is not available. But, as it stands, the regulation of food additives in the US, the UK and elsewhere leaves the burden of proof of harm on average people, despite the fact that most of us are either too detached or too timid to complain or simply don't have the energy to take on multinational corporations.

The history of aspartame is all the more remarkable because of the number of motivated people who have refused to accept the mantra 'if it's approved by the government it must be safe'. Nearly every piece of independent research shows the outrage of these people, who have had to withstand threats of litigation and being vilified in the media as 'hysterics', is justified.

After 30 years of aspartame's commercial success, it would be easy to conclude it is too late to act. And yet earlier this year hundreds of products were swept off supermarket shelves on the chance that they might have contained minuscule amounts of a potentially carcinogenic dye, Sudan 1. No studies existed to show that Sudan 1 *could* cause cancer in humans. The likelihood of any one person's exposure to Sudan 1 being high enough to produce a tumour was minute. Nevertheless, on the basis of the precautionary principle, action was taken.

Aspartame is not a life-saving drug. It is not even a very effective diet aid, as shown by widespread obesity in the West. Until the many concerns about it have been examined in 'corporate-neutral', large-scale, long-term, randomised, double-blind, placebo-controlled human trials (the gold standard of scientific proof) it should be taken out of our food.

## SUCRALOSE

# LIFE AFTER ASPARTAME

Aspartame should never have reached the marketplace. But even if the authorities were to remove it from sale tomorrow, how much faith should consumers place in the other artificial sweeteners on the market? **PAT THOMAS** REPORTS

**T**here is not a single artificial sweetener on the market that can claim, beyond all reasonable doubt, to be safe for humans to consume.

Saccharin, cyclamate and acesulfame-K have all been shown to cause cancer in animals. Even the family of relatively benign sweeteners known as polyols, such as sorbitol and mannitol, can cause gastric upset if eaten in quantity.

NutraSweet believes that its new aspartame-based sweetener, Neotame, is 'revolutionary'; but, seemingly, it is only a more stable version of aspartame. This leaves the market wide open for sucralose.

Sucralose, sold commercially as Splenda, was discovered in 1976 by researchers working for British sugar refiner Tate & Lyle. Four years later, Tate & Lyle joined forces with Johnson & Johnson to develop and commercialise sucralose under the auspices of a new company, McNeil Specialty Products (now called McNeil Nutritionals). Sucralose has been approved by more than 60 regulatory bodies throughout the world, and is now in more than 3,000 products worldwide. In the US, Coca-Cola has developed a new diet drink sweetened with Splenda, and other major soft drink manufacturers are expected to follow suit.

Splenda has had to rethink its slogan "made from sugar, so it tastes like sugar" in the wake of a heated US legal challenge and a recent ruling by the New Zealand Advertising Standards Authority that said it confused and misled consumers. While it is true that sugar, or sucrose, is one of the starting materials for sucralose, its chemical structure is significantly different from that of sucrose.

In a complex chemical process, the sucrose is processed with, among other things, phosgene (a chemical-warfare agent used during WWI, now a common intermediary in the production of plastics, pesticides and dyes), and three atoms of chlorine are selectively substituted for three hydroxyl (hydrogen and oxygen) groups naturally attached to the sugar molecule.

This process produces 1,6-dichloro-1,6-dideoxy-beta-D-fructofuranosyl-4-chloro-4-deoxy-alpha-D-galactopyranoside (also known as trichlorogalactosucrose or sucralose), a new chemical substance which Tate & Lyle calls a 'water-soluble chlorocarbohydrate'.

Accepting Tate & Lyle's classification of sucralose as a chlorocarbohydrate at face value raises reasonable concerns about its suitability as a food additive. Chlorinated carbohydrates belong to a class of chemicals known as

**If sucralose is so safe, why does manufacturer Tate & Lyle have such a fervent need to suppress any criticism of it?**



chlorocarbons. This class of chemicals includes a number of notorious human and environmental poisons, including polychlorinated biphenyls (PCBs); aliphatic chlorinated carbohydrates; aromatic chlorinated carbohydrates such as DDT; organochlorine pesticides such as aldrin and dieldrin; and aromatic chlorinated ethers such as polychlorinated dioxins (PCDD) and polychlorinated dibenzofurans (PCDF).

Most of the synthetic chlorinated compounds that we ingest, such as the pesticide residues in our food and water, bio-accumulate slowly in the body; and many cause developmental problems in the womb or are carcinogenic. How do we know that sucralose is any different?

Tate & Lyle insists that sucralose passes through the body virtually intact, and that the tight molecular bond between the chlorine atoms and the sugar molecule results in a very stable and versatile product that is not metabolised in the body for calories. This doesn't mean, however, that sucralose is not metabolised in the body at all, and critics

like HJ Roberts argue that, during storage and in the body, sucralose breaks down into among other things 1,6 dichlorofructose, a chlorinated compound that has not been adequately tested in humans.

Tate & Lyle maintains that sucralose and its breakdown products have been extensively tested and proven safe for human consumption. The company notes that in seeking approval from the US Food and Drug Administration (FDA), McNeil Specialty Products submitted more than 110 studies that attested to the safety of sucralose.

#### BUT CAN CONSUMERS TRUST THIS RESEARCH DATA?

The vast majority of studies submitted to the FDA were unpublished animal and laboratory studies performed by Tate & Lyle itself, and therefore liable to charges of potentially unacceptable bias. Only five involved human subjects, and these were short-term, often single-dose, studies that clearly could not adequately reflect the expected real-world usage of sucralose. After questions were raised by the FDA about the safety of sucralose for diabetics, and prior to approval, a further five human studies were eventually submitted. On 1 April 1998 the FDA approved sucralose for limited uses; one year later it approved it as a general-purpose sweetener.

Some questions about sucralose's safety, arising from the data submitted to the FDA, remain unanswered. These studies included unsettling findings about animals, which, when exposed to high doses of sucralose, experienced:

- shrunken thymus and spleen;
- enlarged liver and kidneys; and
- reduced growth rate in adults and newborns.

In the FDA's 'final-rule' report, several of the studies submitted by McNeil were found to have 'inconclusive' results or were 'insufficient' to draw firm conclusions from them. These included:

- a test that examined the clastogenic activity (ability to break chromosomes apart) of sucralose, and a test that looked for chromosomal aberrations in human lymphocytes exposed to sucralose';

- a series of three animal genotoxicity studies; and
- laboratory studies using lymphoma tissue from mice which showed that sucralose was 'weakly mutagenic' (capable of causing cellular mutations).

Clastogenic, genotoxic and mutagenic substances are all potential risk factors in the development of cancer.

In addition to these, three studies that looked at very specific 'anti-fertility' effects of sucralose and its breakdown products, especially with regard to sperm production were also deemed insufficient; this is particularly worrying, since other 'chlorosugars', such as 6-chloroglucose, are currently being studied as anti-spermatogenic drugs.

Furthermore, the administration observed that McNeil had failed to explain satisfactorily a reduction in body weight seen in animals fed sucralose and that 'additional study data were needed to resolve this issue'. Ironically for a product that 'tastes like sugar', McNeil argued that weight loss was due to the 'reduced palatability of sucralose-containing diets'. FDA reviewers also found that at mid to high doses there was a trend towards 'decreasing white blood cell and lymphocyte counts with increasing dose levels of sucralose'. This was dismissed as having no 'statistical significance' by the FDA; in healthy animals and humans this may be so, but what happens when already immune-compromised individuals ingest sucralose?

Tate & Lyle says that any lingering concerns about sucralose are unfounded and that only a small amount, 15-20 per cent, of sucralose is absorbed and broken down in the human gut. The rest passes through the body unmetabolised and is excreted in urine and faeces. This in itself provokes important questions.

- What happens to sucralose that is flushed down the toilet? Does it remain stable or react with other substances (for instance, the chlorine used in water-treatment plants, or microbial life) to form new compounds?
- Is sucralose or any resulting chemical compound it may form safe for the environment? Is it harmful to aquatic life or wild animals?

- Will sucralose begin to appear in our water supply, in the way that certain drugs have, silently increasing our exposure to it? And would that increased exposure be safe?

#### PUBLISH AND BE SUED

In the face of emerging public criticism, lawyers for Tate & Lyle are already gearing up for a battle. According to attorney James Turner, a key player in the aspartame drama, 'there's going to be a huge fight about Splenda in the next few months... [Tate & Lyle's] lawyers are already on the case trying to shut everybody up'.

It's a tactic that worked well for Monsanto, which certainly used legal pressure against anyone who criticised NutraSweet. Recently, the publisher of the local newspaper the *Brighton Argus* considered it prudent to publish an apology composed by Tate & Lyle (or their lawyers) or face a legal action for defamation and loss of sales after printing an article suggesting that sucralose was harmful to humans.

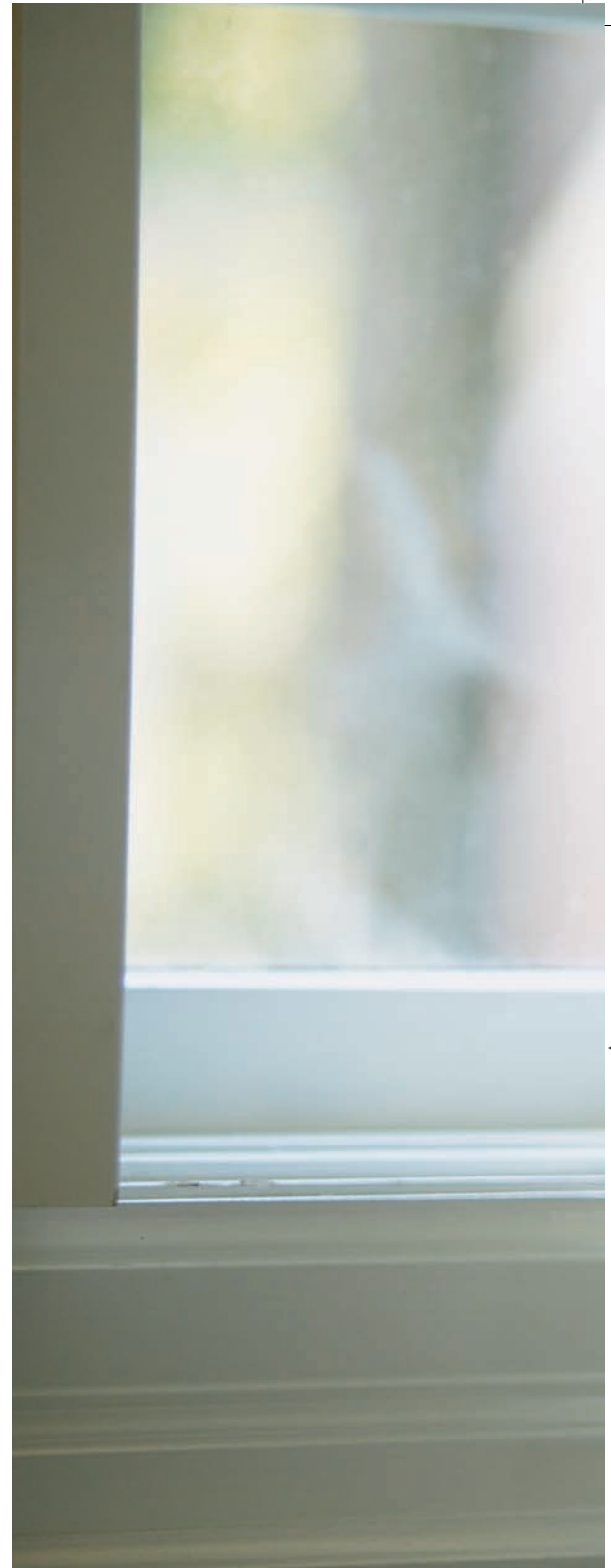
Tate & Lyle's first high-profile victim, however, was mercola.com – one of the world's most visited internet health sites. Run by Dr Joseph Mercola, the site has been a vocal critic of sucralose for years. Instead of carrying freely available information on sucralose that might stimulate spirited public debate, it now carries the following message: 'Attorneys acting on behalf of the manufacturers of sucralose, Tate & Lyle Plc, based in London, England, have requested that the information contained on this page not be made available to internet users in England.'

At this point, concerned consumers should be asking themselves several questions. Does the story of sucralose sound familiar? If sucralose is safe beyond any reasonable doubt, why is there such a fervent need to suppress any criticism of it? Finally, whom do such tactics really serve? Do they serve the consumer and the principles of choice, information, safety and redress? Or do they serve the corporate machine and its need to keep generating profits without taking responsibility for the human cost of doing so?

TELEPATHY

Far from being a cranky relic of a pre-Enlightenment dark age, belief in telepathy would seem to be confirmed by contemporary science and might even help secure the planet's survival BY JEREMY SMITH

# A NEW WAY OF SEEING





Why are pet dogs so often waiting at the front door when their owners arrive home?

PHOTOGRAPH BY CORBIS

**A**n empty room. Nothing in it but two chairs, one behind the other, and a computer screen that has been positioned between them. A brown-haired woman enters, and sits down in the front chair to await the beginning of the trial. Seconds later, a man silently follows her in. He too sits down, in the chair placed a few feet behind the woman. Between them

the computer screen flickers, lighting up the man's face with a pale imitation of fire.

A command flashes silently on the computer screen, instructing the man whether or not to stare into the back of the woman's head; all she has to do is state whether she believes he is or is not staring at her; the man inputs what happens into the computer. They repeat the trial 30 times, before getting up from

the chairs and leaving the room. Two more subjects take their places.

This surreal ritual has been going on in a science museum in Amsterdam since 1985. By 2002, more than 18,700 couples had taken part. The results are staggering. It seems that people really can tell when they are being stared at, despite being unable to see whether they are or not. So often have people been right that the chances of it being simply a matter of



with people with really strong bonds,' comments Sheldrake. 'In our telephone telepathy tests people have to name four people to work with, but often they can't think of four people to whom they are extremely closely bonded. So we are diluting the effect.'

One of the most impressive cases of telepathy on record, says Sheldrake, was researched by Sir Rudolph Peters, a Cambridge professor whom Sheldrake knew when he was a student. Peters and his colleagues tested a mother and her severely mentally retarded son whom she looked after and was very close to. The case had first come to light when the very poorly sighted boy had gone for an eye test and it was found that he was doing much better on the test than he ought to have done. When the ophthalmologist sent the boy's mother out of the room his ability to read the letters collapsed. It turned out that somehow he was reading the letters through his mother. She wasn't actually telling him the answers, but she was seeing the letters and he was picking them up telepathically from her.

Peters' team then set up a test whereby the mother and son were in different laboratories about five miles apart. They showed the mother a series of numbers and letters, and the child guessed them at a success rate whose probability would be a billion to one against if it were a matter of pure chance. It would seem that this was due to the intensity of the bond between mother and child, a bond that had developed because it was necessary for the child's survival.

Day-to-day survival is a far greater influence on the lives of many animals than it is on much of humanity; indeed, examples of such phenomena are plentiful in the animal kingdom. British horse trainer Henry Blake once tested his horses for telepathy by separating pairs of them (generally siblings) that were used to living together. In the 199 tests Blake did, he found that when one was exercised, fed or fussed over, despite being out of sight and hearing of the other, the other animal also reacted in 68 per cent of the trials. When he ran a controlled experiment with horses that were hostile to each other, the reaction rate was one out of 15. In another case, one investigated by Sheldrake, a Rhodesian

ridgeback was shown to be waiting at the window for its owner only 1 per cent of the time if the owner was not on her way home from work. When she was on her way home, the dog was there 26 per cent of the time.

And remarkable studies have been done on groups of animals such as birds or fish that travel in large groups to find out how it is they all seem to know when to turn at the same time, and where to go. When schools of fish are under attack, for example, one of their defensive manoeuvres is what is known as flash expansion, whereby all the fish will speed away from the centre of a shoal at the same time. Somehow they manage to accelerate in a matter of milliseconds without colliding into one another. Yet they are moving too fast for their nerve impulses to travel from eye to brain to muscle.

There are numerous other phenomena that current science simply cannot explain. How, for example, do insects such as termites work together to build vast mounds up to 10 feet high and lined with galleries, chambers and even ventilation shafts? Why, as Sheldrake wrote in this magazine in March, did so few animals die in December's tsunami disaster? Had they 'sensed' something that we, despite all our technological advances, were 'deaf' to?

Despite the ever-growing weight of Sheldrake's research, he is ignored by most of the scientific community. The roots of this antipathy can be traced right back to the so-called Enlightenment of the 17th and 18th centuries: growing belief in science meant that all that could not be explained – telepathy, other people's science, witchcraft – was rejected out of hand.

Little has changed. Between 1890 and 1990 there were just four papers written about people's ability to tell, without seeing, when they are being stared at.

Yet Sheldrake is no witch or red-eyed hippy theorist. He's a former research fellow of the Royal Society, and was a fellow of Clare College, Cambridge. He studied natural sciences at Cambridge, then went on to study philosophy at Harvard, where he became a Frank Knox Fellow before taking a PhD in biochemistry back at Cambridge. His book, *Dogs That Know When Their Owners Come Home* was named the British Scientific and Medical Network Book of the Year in 1999.

Sheldrake believes that the phenomena he observes can be explained by fields. Think first of one of the fields many people take for granted, every single day. When someone calls you

on your mobile phone, you are connected through the electromagnetic field. Wherever you are at any moment, someone else can call you and you can pick up their voice and share a conversation with them. The field carrying your conversation is everywhere, which means that your conversation is everywhere. What this also means is that every other conversation being had on mobile phones is currently also in your room at this moment. Along with every radio

channel and every TV picture. Somehow, there is a vast amount of information contained in the apparently empty air.

We accept unquestioningly that when we talk into a phone it is somehow broadcast through the air and picked up by the person at the other end. Our phone sends a signal that is intended for someone with a specific phone number,

In one case, a mother and her severely retarded son were placed in laboratories five miles apart. They showed the mother a series of numbers and letters, and the child guessed them at a success rate whose probability would be billion to one against if it were a matter of pure chance

## TELEPATHY

and they can instantly receive it, wherever they are. So what of the mother and her disabled child in Peters' experiments? Is it possible that they were somehow connected through a 'field', that their closeness, their connection, meant that she was able to 'broadcast' to her son the answers to the eye test?

The inbuilt response is to instantly reject such talk as unscientific. In fact, it is anything but. In current scientific understanding, the only way that things can be linked at a distance is through fields. The earth is linked to the moon and the sun through the gravitational field. I am linked to my friend on the other end of the telephone through the electromagnetic field. Iron filings arranged into patterns around a lump of iron are linked through the magnetic field.

So what of humans and other living beings? We are made of cells and molecules, all of which involve oscillations. Quantum physics talks of entanglement, whereby particles separated over a distance will still behave as if they were connected. Why then is it so hard for us to accept that, just possibly, we might be connected to each other in a comparable fashion?

'The existence of fields stretched out in space is testable,' says Sheldrake, 'because if you can separate parts of a system that are linked by what I call a "morphic field" then they should still be in communication, even if they are separate in the normal sense. When members of the group move apart, like wolves do when they go hunting and leave cubs in the den, the bonds between them are not broken; they are stretched, and this field connection between these separated parts of the group continues to link them. I think that's the basis of telepathy.'

He continues: 'If you can show that members of groups can continue to interact at a distance beyond the range of normal sense then clearly something is happening, and I would say that was evidence of the morphic field. Others might say, "well even if you prove the existence of telepathy, it doesn't prove it's a morphic field". I would say it's going to be some kind of field, as fields are the only things that we can understand that link things together at a

### HOW TELEPATHIC ARE YOU?

Have you ever had the experience of knowing who's calling you on the phone before you answer it? Or you think about someone – maybe for the first time in a while – and soon afterwards an email arrives? This is the procedure Rupert Sheldrake uses in an attempt to test whether such phenomena are just a matter of coincidence, or whether telepathy is involved.

An individual has to guess which one of four others is sending them a message. By the laws of chance, they would be correct about 25 per cent of the time, but Sheldrake's findings in similar experiments show that some people are correct much more often than that, which suggests that telepathy is involved. Could you be one of these people? The individual tested is told they will get a message at a fixed time from one of the four. The sender is picked at random. Just before the message is due to be sent, the receiver will be asked to guess who it is going to be from. This happens 10 times. The whole thing takes 15 to 20 minutes.

If you would like to help Sheldrake with such an experiment, you need to:

- Set up an experimental group. This will consist of yourself and two close friends or family members – your senders. You are more likely to be successful if you choose people you are close to emotionally, but physical distance is not a problem: the people you select can be anywhere in the world. The computer will generate two 'virtual people' to make the number up to four.
- Choose a time (immediately or in the future) when everyone involved can be available at a computer for up to 20 minutes.
- Register the details of your experimental group online at [www.sheldrake.org](http://www.sheldrake.org).
- All log on at the agreed time, making sure that everyone's sound system is activated.

For each of the trials, the computer will pick one of the senders at random and will ask them to think about you and write you a message. You will be alerted when you are about to receive a message, and will have to indicate who you think is about to send it. You will either be right or wrong. (You will probably do better if you go with the first thought that comes to you.)

After all 10 trials, you will be given your results.

Sheldrake is interested in contacting some people who show high potentially telepathic abilities. They will be offered the chance to do the same experiment under more rigorously controlled conditions (on video to make sure they are not being contacted by any other means). If you are interested, contact him via [www.sheldrake.org](http://www.sheldrake.org).

distance. I call it morphic, you can call it what you like, but it's going to be some kind of field.'

Like gravitational, magnetic or electric fields, morphic fields, proposes Sheldrake, connect and influence everything we do. In an increasingly atomised world the implications of this are profound. In place of loneliness, disillusion and disempowerment, Sheldrake offers an alternative vision, with our thoughts and actions influencing and linking us to everything around us, which in turn influences everything we do. It both demands of us more responsibility, and offers us greater rewards. 'When we recognise that we are much more connected,' Sheldrake concludes, 'that our minds are actually extended all

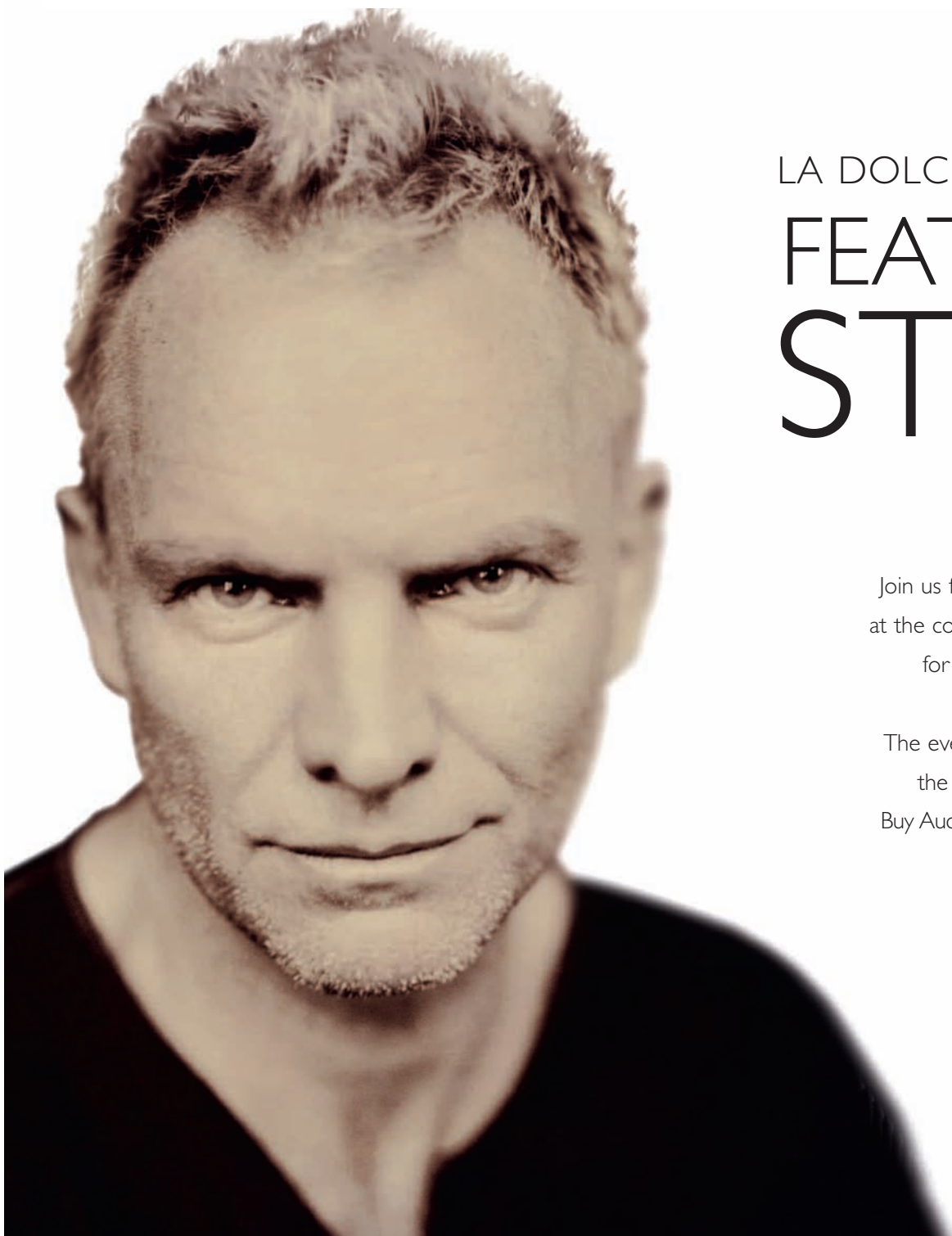
around us, that our thoughts and our intentions can have influences at a distance, I think this is a much more ecological view – it shows that we are inter-related with a larger whole. If people feel more connected to the world around them they might be less likely to accept its destruction.'

■ Jeremy Smith is deputy editor of *The Ecologist*

If you are interested in taking part in any of Rupert Sheldrake's experiments or if you have experiences that you consider telepathic, contact him through his website at [www.sheldrake.org](http://www.sheldrake.org). One experiment currently being conducted is explained in the box on this page

# La dolce vita

THE SWEET LIFE



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COLOMBIA



# COMPOSTING UNDER FIRE

Next time you grumble that it's too much effort to separate your plastic from your cans, imagine doing it as the bullets are flying overhead. BY ANNE BARR

I've just spent a week in the settlement of San Josesito, in the northern Colombian region Urabá. This is where the Peace Community of San José de Apartadó relocated when the Colombian police and army moved into their village three months ago. They left their comfortable houses to build a new village from scratch because they refused to accept as their 'protectors' the same armed forces whose most recent crime (in a very long list) was the February massacre of eight members of the community, including a baby and two children.

They also moved out because they knew that the presence of the police and army was bound to attract guerrilla attacks. Which it did. When I arrived on Monday morning I had just missed the last bursts of machine-gun fire from a night-long battle between soldiers and guerrillas that had left three soldiers injured, and the people of the Peace Community shaken by a sleepless night





## COLOMBIA



**Fun and games are part of life in the Peace Community – alcohol isn't. In the past, Colombia's paramilitaries used alcohol-fuelled violence as an excuse to 'solve the community's problems'**

of 'fireworks' (so called because the army bullets are accompanied by a little red light – apparently something to do with differentiating between enemy and 'friendly' fire).

The new settlement is less than a mile from the town of San José in Antioquia province, where the army and police are barracked. It's built on a river bend, surrounded on all sides by forest – idyllic. In three months the community has built more than 40 wooden houses, each with a space mapped out for a garden and kept dry by miles of drainage trenches and stone and gravel paths. They dismantled the cool, breezy, straw-roofed round hut that was their community centre in San José and moved it to the new village green. The dozens of pigs,

chickens and mules are happy as there's more mud and grass here, and the children love the river with its excellent rapids and swimming holes.

I went there to follow up on a course on gardens and composting held there last August. However, I never got to see the six gardens that the people of the community have created in the village of La Union, two hours' walk from the new settlement. The constant outbursts of shooting and bomb-dropping, the hundreds of new police and army members brought into the region, and, most of all, the huge workload at the new settlement made travel impractical.

After a day settling in, I figured the most useful thing I could do was sort out the community's rubbish problem.

They are determined to recycle and make compost, and when I got there they had already dug two enormous pits for organic and inorganic rubbish. But many people hadn't understood the concept of separation, so both were filled with smelly mixtures of plastic and rotting vegetable scraps, and one had flooded and turned into a malarial mosquito breeding ground.

The next day I went round the houses to talk to each family about recycling and compost, before convening a village meeting. Realising that the adults were all far too busy, the following day I started working with the children. I was a bit nervous about how they would take to collecting and sorting out the community's rubbish, but I figured the best way to teach them was to actually do it. So we borrowed two wheelbarrows, one each for organic and inorganic waste, and went to each house to collect and sort the rubbish.

The children took about 15 seconds to become enthusiastic recyclers and another 30 to figure out an excellent working system: we tipped out each bag of rubbish in front of the householders and showed them how they should have separated it into categories.

After collecting half the village's rubbish we began a new above-ground compost pile and collected lots of sawdust, horse manure and leaves and made a pretty, clean compost heap. I had thought I'd manage to get them to work for an hour or two at most, but they worked me into the ground until it was me who suggested we finish the day with a swim in the river.

Over the following days, when the nearby shootings and bombings allowed us out, we repeated the collecting and teaching process with the rest of the village. Two young men made a corral around the growing pile of waste to keep the community's pigs and chickens from dismantling it. A huge group of adults

### RECORRE – STRIVING FOR PEACE AND SELF-SUFFICIENCY

The Peace Community of San José de Apartadó is one of 13 indigenous, black and *campesino* communities that form Recorre (the Network of Communities in Resistance). Recorre is not an NGO but a loose web of communities that have had enough of the violence, disappearances, displacements and food, medical and education blockades caused by Colombia's army/paramilitary forces and, to a lesser extent, the guerrillas. The San José community is the unwilling leader of this network, simply because it is the most organised, committed and dynamic of the communities involved. It constantly tries to rotate leadership and responsibility among the other groups, but they always land back on its doorstep. Recorre's aim is for more self-sufficiency in food, healthcare, education and justice. It is not looking to set up independent states, just for its members to be able to live peacefully in their own country.

and children cleaned up the festering pits, keeping one open for plastic and tins. We held a rubbish-tip meeting to show everyone how to manage the compost, and the children decided to organise themselves into a work group and ask each household to pay them a little each month (the equivalent of about 10 pence) for their collecting service, while I made a big poster to show simply which rubbish goes where. We also dug and planted a vegetable garden, cooked lots and swam regularly in the river.

Most nights were disturbed by the fireworks. We were very lucky that no one in the settlement was hit by one of the many stray bullets. We sat around talking and drinking tea till the shooting died down. These people keep their sense of humour even in the most extreme situations, and usually we ended up laughing at rude stories about who threw up/ pissed/ shat themselves during past bombardments. There is nowhere to escape to, as running into the forest would mean running into even more danger and being shot 'by mistake'. I asked them what plans they had for a direct hit... 'We'll dodge the bullets and catch the bombs and throw them back,' said one man laughingly.

Adults and children talk openly and naturally about their terrible losses in the past and their fears in the present. In the river one day, a beautiful little girl told me that she was seven when her mother was killed and eight when they shot her father. She told me she was the daughter of Luis Eduardo Guerra, who was killed alongside his eldest son, Deiner, in the February massacre; his wife was killed by a stray grenade last July. The little girl now lives with her baby brother, four cousins, a few stray babies and her aunt in a one-roomed house, where they cry when we talk about her father but the rest of the time the house is filled with love and laughter. Another aunt wanted to take the

girl to the city, away 'from the danger'; but the aunt angered everyone as she would not visit San José to see where her niece lives as 'they're all guerrillas up there', and she would have ripped the girl away from what was left of her nearest family at an extremely traumatic time. She had no idea of the kind of love and community that this girl is growing up with. She could only see the poverty

Calling the *campesinos* guerrillas ensures less public outrage when there is a massacre, as then people can just shrug and say 'they probably deserved what they got'

and danger; real, of course, but in the end only secondary factors.

This woman's misguided attitude is common among people who don't know the community well, as the powers-that-be in Colombia have deeply vested interests in making sure the guerrilla reputation sticks. If it were widely known that a small and utterly defenceless group of dirt-poor *campesinos* has managed to take an effective stand against the horrors committed on a daily basis by the state forces/ paramilitaries (and, to a lesser extent, by the guerrillas), in spite of suffering terrible cruelties for so doing... Well that would be *really* dangerous. As one man said: '[Colombian] president Alvaro Uribe Velez says worse things

#### WHO'S FIGHTING WHO IN COLOMBIA

For anyone unfamiliar with the seemingly endless complications of the Colombian conflict, there are important differences – as well as far too many tragic similarities – between the army/paramilitary forces and the guerrilla groups.

##### THE GUERRILLAS

The left-wing guerrilla groups frequently commit dreadful killings and cruelties, and often by 'mistake' – as the community of San José knows to its cost, having had two young men killed in 2000 by ignorant militia, who decided that because one of the men was Irish, fair and blue-eyed he had to be a gringo and therefore an enemy. However, in spite of the chaos and corruption within their ranks (caused by the easy availability of lots of drug money in recent years), the guerrilla forces are basically *campesino* defence armies. They came into being because of the constant slaughters, massacres and displacements suffered by poor country people at the hands of a rich, very corrupt, US-supported ruling class. The guerrillas are not the cause of the war here; they are just a symptom of the deep, ongoing oppression.

Without their existence, Colombia would be more de-forested and less democratic than it is, and it is unlikely that there would be 'space' for groups like the Peace Community. *Campesinos* fear the guerrillas – for they are often arbitrary and petty in meting out 'justice'; but they also appreciate them, as there is much less violence and more social equality in areas of guerrilla influence. How well an area is run by them depends very much on the level of the local commander's social consciousness: many are excellent, well educated and very socially aware leaders, but some are violent despots who only understand arms.

##### THE ARMY / PARAMILITARIES

In contrast, the army/paramilitary death squads are mercenaries, created, armed and paid by big business, national and international, to terrorise *campesinos*, indigenous and black peoples off ancestral lands that are rich in minerals, wood and water. They are driving communities off collective lands, which are then turned into enormous plantations for the cultivation of African palm oil (a future petrol substitute among other things). They also strive to ensure the continuity of the sympathetic powers-that-be and are very successful at this right now, thanks to the ironically titled 'peace process' initiated by Alvaro Uribe Velez. The Colombian president first began to give the death squads legal status when he was governor of the state of Antioquia many years ago. Where there are no natural riches to exploit there are no paramilitaries.

## COLOMBIA



This painting by one of the community's elders represents an attack by paramilitaries that occurred in July 2000. Six of the community's leaders were killed. Despite more than 100 people giving testimony to state investigators, no charges have been pressed. Some witnesses were later killed themselves

about us than he does about [the revolutionary guerrillas] the FARC.' This is true, because the *campesinos* represent a true ideological opposition to the armed, drug-mongering forces that control Colombia. Furthermore, calling the *campesinos* guerrillas ensures less public outrage when there is a massacre, as then people can just shrug and say 'they probably deserved what they got'.

In the six days I was there, the tension and pressure mounted daily. The 'peace process' with the paramilitaries is taking place just hours away, and the 'reinserted' paras (legalised killers, in other words) are to be sent to 'help' the police and army

These people keep their sense of humour even in the most extreme situations, and usually we ended up laughing at rude stories about who threw up/ pissed/ shat themselves during past bombardments

to travel to San José to help, work with and accompany these brave people would be welcomed. The company of foreigners gives great moral support and is a real buffer between them and the war. But you'd have to be aware of the following factors: that San José is in a war situation and therefore dangerous; that the climate, being hot and humid, is not easy for people from temperate zones; that the conditions of bed and board are

in San José; one angry policeman threatened that 3,000 were coming. That was probably an exaggeration, but 30 would be enough to cause real terror and death. Daily, I felt terrified for the people I was working with, since unless the open paramilitarisation of Colombia is stopped they have no future. Nonetheless, they are all deeply committed to staying on their land even if it means death.

The only 'protection' they have is the voices and actions of support from abroad. Anyone of any age who would like

extremely basic, and as people are extremely poor you would have to contribute towards your own living costs; that life in San José is tough and physical, and the daily agricultural work is hard but gratifying; that psychologically you'd have to be patient, calm and willing to listen, learn and observe without trying to impose your own views; that you'd need to have a fair grasp of the Spanish language; and that the use of alcohol and drugs is completely prohibited inside the community. On the other hand, the gains from working with a brave, pioneering community that is building an *eco-campesino* village from scratch are enormous.

■ Anne Barr works with the Atlantis Ecological Community, a small commune consisting of English, Irish and Colombians who've lived and worked in Colombia's southern mountains since 1988. To read more about the Atlantis Communities eco-activities look up Jenny James Green Letters from Colombia on [www.afan.org.uk](http://www.afan.org.uk) or telephone Bogotá 6244958. If you are interested in working as a volunteer at San Josesito, contact Anne at [atlantiscol@hotmail.com](mailto:atlantiscol@hotmail.com); Calle 98bis # 54 – 39, Apartamento 404, Interior 3, Bogotá, Colombia

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in the last decade Britain has lost  
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**but there is hope for ghost-town Britain...**  
**THE SUSTAINABLE COMMUNITIES BILL**

aims to reverse community decline by giving you (ie, local citizens), rather than central government, the power to make decisions on issues such as: ■ local services and facilities ■ transport ■ waste management ■ green spaces



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## HELP US TO PLAN FOR THE FUTURE

# Defra Science Advisory Council - Members

The Department for Environment, Food and Rural Affairs (Defra) is seeking to appoint new members to the independent Science Advisory Council (SAC). The SAC helps ensure that Defra's policies are based on the best scientific evidence available. If you feel that you could make a strategic contribution in advising on Defra's use of science we want to hear from you.

Desired attributes include a broad understanding of scientific fields relevant to Defra and a commitment to help improve the contribution that science makes in Defra's approach to its policy responsibilities. The ability to work effectively in committees is important, as is the ability where appropriate to offer constructive challenge to expert thinking. Members will be appointed individually for their ability to provide expert independent advice to the Defra Chief Scientific Adviser (CSA).

Relevant areas of science include: engineering and technology; agriculture; fisheries; forestry and veterinary science; biological; environmental; mathematical and physical sciences; psychology; geography; economics and social studies, plus other allied subjects. We are particularly interested in receiving applications from experts who specialise in environmental pollutants, virology, energy (especially renewables), geology and soils. We are also mindful of the importance of consumer focused issues and would be keen to hear from those who feel they could bring a lay person's wider perspective to SAC deliberations.

The primary function of the SAC is to provide strategic advice on all of Defra's science activities and their relationship with both Defra's policy goals and the wider science base and horizons. It also has the specific function of advising the CSA on scientific aspects of Defra's response to emergencies.

Members will be appointed for a period of three years (with the possibility of reappointment subject to appraisal). Meetings take place four times per year. Members will be asked to provide additional input by attendance at sub-group meetings and some preparatory work for meetings will be necessary. A daily fee and expenses will be paid. Training will be provided as appropriate.

For further information and an application pack please visit our website (<http://www.defra.gov.uk/science/how/advisory.htm>) or contact: Dr Joanne Wallace, Science Advisory Council and Emergencies Branch, Science Directorate, Room 405, Cromwell House, Westminster, London SW1P 3JH. Telephone: 020 7238 1587. Email: [science.advisory.council@defra.gsi.gov.uk](mailto:science.advisory.council@defra.gsi.gov.uk)

**The closing date for receipt of completed application forms is 16 September 2005. We anticipate interviews will be held 16, 17 and 18 November 2005.**

Defra is committed to improving the diversity of the boards of its public bodies and welcomes in particular applications from members of currently under-represented groups including women, people from ethnic backgrounds and disabled people. All public appointments are based on the principle of merit and in accordance with the Office of the Commissioner for Public Appointments (OCPA) Code of Practice.



# reviews

## BOOKS

### REVIEWS

#### **Ecological Intelligence**

Ian McCallum

Africa Geographic, 2005, £9

We think of ourselves as the most intelligent life form ever to have inhabited this earth, yet have done more to destroy the ground beneath our feet and the animals and plants that share it with us than any other species. Our ecological intelligence, in other words, is far from perfect. In this profoundly important book, Ian McCallum makes the increasingly necessary call for a return to nature. 'Ecology' literally means 'the study of the home' and McCallum has provided us with a superb guide for how to get back there.

**Reviewed by Jeremy Smith**

#### **Hugo Chávez: the Bolivarian revolution in Venezuela**

Richard Gott

Verso, 2005, £9.99

Forget Saddam Hussein. The man who really gives Washington headaches is the president of Venezuela, Hugo Chávez. He is loved by the poor peasants of his country, has done much to improve the rights of Venezuela's indigenous peoples, and makes foreign oil companies pay for the damage they do to the environment. When you

add to these credentials the fact that Venezuela has the world's fifth biggest oil industry, it is no wonder Washington wants rid of him. Gott, a former Latin America correspondent for *The Guardian*, uses his considerable knowledge of Venezuela to provide this updated account of the most inspirational leader in South America today. And he never lets his undoubted faith in the revolutionary process that Chávez personifies cloud the thoroughness of his journalism.

**Reviewed by Rufus Weston**

#### **Animal Experimentation: a harvest of shame**

Moneim A Fadali

Hidden Springs Press, (2005), \$14.95

All too often, books about vivisection fall into one of two polar categories. Either they are written with passion but weak on the science. Or they are erudite works debunking the notion of animal testing as 'scientific', but turgid to read. *Animal Experimentation*, in contrast, exhibits the strengths of both and the weaknesses of neither – as the chapter headings suggest. Alongside 'Animal experimentation is harmful to human beings' and 'Vivisection did not advance medicine' are 'Animals have a fundamental right to life' and 'Mere strength frequently dooms', in which author Moneim A Fadali takes a fresh approach to the concept of the survival of the fittest: the 'fittest' that survive are not those that bludgeon all around them into a shape they can control, but those who 'fit' best into their ecological niche.

**Reviewed by Sarah McCarthy**

#### **CND – Now More Than Ever: the story of the peace movement**

Kate Hudson

Vision Paperbacks, 2005, £8.99

CND chair Kate Hudson narrates the struggle for nuclear disarmament: a struggle that has lasted nearly 50 years and succeeded in mobilising thousands. The book begins with the recollections of Hiroshima and Nagasaki survivors, and ends with the cynicism of a war sold as an attempt to stop the spread of weapons of mass destruction. In addition to providing a chilling history of the US's pursuit of global dominance and looking at the insanity of the arms race, Hudson reminds us of the strength of public opinion and the fundamental need for protest in favour of peace.

**Reviewed Frankie Mullin**

#### **Ecological Literacy: educating our children for a sustainable world**

Michael K Stone & Zenobia Barlow

Sierra Club Books, 2005, £10.95

This groundbreaking book, pinpoints education as the single most important factor in the attainment of sustainable thinking. Combating HG Wells' assertion that we are 'in a race between education and catastrophe', it marries theory and practice in an attempt to reorientate the way human beings live by developing new curricula to improve children's ecological understanding. Theoretically robust and beautifully realised, the book offers concrete suggestions for the attainment of some form of global balance for future generations.

**Reviewed by Dan Glas**



## REVIEWS

### CD OF THE MONTH

#### Chávez Ravine

Ry Cooder

Nonesuch, 2005

In the 1940s, Chávez Ravine was a dusty shantytown perched on the hills above Los Angeles, home to hundreds of Mexican immigrant families, a place of poverty that was rich in community and soul. In 1950, it was decided that it would be cleared to make way for a low-income public-housing project. Most of the families that were living there took the paltry compensation sum offered. Those that refused to budge were evicted. However, LA's legendarily corrupt real-estate sector (think Roman Polanski's *Chinatown*) managed to get the media and public to see public housing as 'creeping socialism'; and the FBI stepped in to squash the project. Eventually, the housing authority sold 170 acres of Chávez Ravine back to the city, which offered the site to the owner of the Brooklyn Dodgers baseball team, Walter O'Malley, who built a new stadium there. An entire community was displaced. This is Chávez Ravine's story told by a cast of phenomenal musicians, who as well as having impeccable musical credentials have pretty good political ones, too. Singer, Lalo Guerrero, for example, worked with civil-rights and trade-union activist Cesar Chavez. The story, Ry Cooder explains, is comparable to 'when they put in a dam and flood a canyon with water'; except in this case cement was used instead of water. With *Chávez Ravine* Cooder has achieved a rare balancing of political conscience and musical virtuosity.

Reviewed by **Jeremy Smith**



### WEBSITES OF THE MONTH

#### Stop Suez

Stopsuez.org is a new global campaign against the water transnational Suez. Many poor communities are now struggling to get enough water to live because in recent years giant multinationals like Suez have been buying up their national water supplies and then selling services back to them at exorbitant prices. Find out more and see what you can do to help at [www.stopsuez.org](http://www.stopsuez.org)

#### Keep the UK GM-free

Although British supermarkets claim they don't sell any products containing GM, many of the animals they kill for meat, or from which they obtain milk, may well have been given GM feed. Activists need to let the supermarkets know this is unacceptable before too much GM gets into the UK food chain. You can email the UK's four biggest supermarkets via the Friends of the Earth website. Please take action now and forward the following website address to your friends and family:

[www.foe.co.uk/campaigns/real\\_food/press\\_for\\_change/gm\\_labelling/index.html](http://www.foe.co.uk/campaigns/real_food/press_for_change/gm_labelling/index.html).

## EVENTS

### 8-11 SEPTEMBER

#### CITY FARM FEDERATION'S SILVER JUBILEE

##### Mudchute Park and Farm, Isle of Dogs, London E14

Mudchute Park and Farm on London's Isle of Dogs is the largest inner-city farm in Europe, with more than 30 acres of land sited on an area of high ground created from spoil and silt removed from the surrounding docks. From 8 to 11 September it hosts the 25th birthday celebrations of the Federation of City Farms and Community Gardens. Activities will include site visits, workshops and social events, with a community festival taking place on the Saturday featuring a horse show, a silent auction and an opera.

■ [www.cityfarm.org.uk](http://www.cityfarm.org.uk)



### 10-16 SEPTEMBER

#### DISARM THE DSEI ARMS FAIR

##### ExCeL Centre, Docklands, London E16

The Defence Systems and Equipment International Exhibition and Conference (DSEi) is the world's biggest weapons fair. Sponsored by the British government, it sells everything from battleships and attack helicopters to cluster bombs and machine guns. At DSEi 2003 there were 973 exhibitors selling weaponry to delegates from a third of the world's countries. These included seven of the G8 countries, six of which are among the world's 10 leading arms exporters.

■ [www.dsei.org](http://www.dsei.org); 07817 652029

### 22 SEPTEMBER

#### WORLD CAR-FREE DAY

##### Nationwide

Does exactly what it says on the recyclable tin. A day to leave the car at home and walk, cycle or take public transport to work. The more people that do it, the better it gets. There are specific events organised all over the country.

■ [www.carbusters.org/wcfd](http://www.carbusters.org/wcfd)

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Mitch Tonks feasts on nature's viagra



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Blackspot ethical shoes, page 81



# Contents

## 70 September in season

Everywhere you turn there's fresh British food to be had, from berries in the hedgerows to poppies in the meadows or trees heavy with apples. You can even head down to the shore and try some kelp (apparently it tastes a bit like peanuts)

## 72 September recipes

**Hugh Fearnley-Whittingstall** offers not just chutney, but 'glutney'. There's also tomato and basil ice cream, a blackberry whisky cocktail and a chance to have River Cottage butcher Ray Smith teach you how to prepare a pig carcass

## 76 Vineyard profile – Domaine Laguerre

Wild fennel grown among the vines wards off viruses. Instead of the grapes being sprayed with chemicals, mixtures of nettle, chamomile, fern and garlic are used. Even the presses rely on gravity rather than modern mechanics. Welcome to **Domaine Laguerre**, a Perpignan vineyard proving that nature really does know best

## 79 Oysters

Casanova is said to have eaten 50 of them each morning in the bath. Here, **Robin Wright** offers plenty of reasons for savouring the salty delights of this season's favourite aphrodisiac. And **Mitch Tonks** offers a couple of mouthwatering recipes – tempura oysters with chilli, mint, lime and coriander and the wonderfully named Oyster Rockafella.

## 80 How to kill crabs and lobsters humanely

It's common to boil crabs and lobsters live. But, says animal-welfare group the Shellfish Network, this is actually as unpleasant as it sounds. It's far better to freeze crustaceans or get your fishmonger to sever their nervous system for you

## 81 The most ethical shoe in the world

Launched by an 'anticorporation' of Canadian media activists, the Unswosher is made from organic hemp and old car tyres; and all the profits get ploughed back into campaigning

## 84 Thermafleece

Largely thanks to foot and mouth, the hill farmers of Cumbria are struggling to survive. But hope is at hand, thanks to a company turning the coarse wool of the county's sheep into an excellent, environmentally friendly insulation material. More energy-efficient than artificial insulation, and with none of the toxic risks, installing Thermafleece will cut your fuel bills and provide a lifeline to a dying breed

Seasonal recipes from page 72



GREEN PAGES IN SEASON

# SEPTEMBER IN SEASON

Frankie Mullin chooses the month's folk and natural highlights

## AUTUMN SOLSTICE – 25 SEPTEMBER

Alban Elued is the Druidic name for the autumn equinox, when the daily periods of light and darkness are equal. This occurs when the sun crosses the equator on its journey southwards (from a northern point of view). Since, in the past, most European peasants were not accomplished at calculating the equinox, historically its date was fixed on 25 September.

The festival is one of the four quarter-days of the year, marking the high point of each season. At Alban Elued, the heat from the sun god, Lugh, has not yet faded and the final harvest of Samhain (literally meaning 'summer's end') is still to come (on 1 November), but the months of winter are on their way.

The celebration of the middle harvest was represented by a woman bearing the symbols of the earth's abundance: a

wheat sheaf for food and for life's experience; wine as a symbol of old stored wisdom. It was a time for eating, drinking and companionship.

The medieval church Christianised the festival under the name of Michaelmas, the feast of the archangel Michael. In England it was the custom to eat a goose at Michaelmas, which was supposed to protect against financial need for the coming year. In Ireland, finding a ring hidden in a Michaelmas pie meant that you would soon be married.



## September

### FRUIT & VEGETABLES

**VEGETABLES:**

- Asian greens
- Asparagus
- Beans – broad, French, runner
- Beetroot
- Broccoli – headed
- Cabbage
- Carrots
- Cauliflower
- Celery
- Courgettes
- Cucumbers
- Fennel
- Garlic
- Kale
- Kohlrabi
- Leeks
- Lettuce – indoor and outdoor
- Mushrooms
- Onions
- Parsnips
- Peas – shell, mangetout, sugarsnap
- Peppers
- Potatoes
- Pumpkins
- Radishes

- Shallots
- Spinach
- Spring onions
- Summer Squash
- Swede
- Sweetcorn
- Swiss char
- Tomatoes
- Turnips
- Watercress

**FRUIT:**

- Apples
- Blackberries
- Blueberries
- Currants
- Loganberries
- Plums
- Raspberries

PHOTOGRAPH BY WWW.SOILASSOCIATION.ORG/IMAGES



## SEPTEMBER FOOD FOR FREE

**Rowan berries:** Also known as the mountain ash, the rowan tree is recognisable by its brilliant orange fruits. These should be picked before they go mushy or are eaten by birds, and can be brewed into ale, distilled into alcohol or made into a marmalade-like jelly that goes well with game or lamb.

**Fennel:** A tall, greyish perennial often found near the sea, with spindly aromatic leaves and yellow flowers. All parts of the plant can be eaten and have a fresh, nutty flavour. The seeds are good for wind.

**Hazel:** The first tree to recolonise the British Isles after the Ice Age. The nuts became part of Celtic legend as a symbol of concentrated wisdom.

**Watercress:** Should never be picked from stagnant water, and should be cooked to kill the liver fluke larvae which it may harbour. Cut the tops off shoots and make into soup or eat as a vegetable with lemon and chopped hazelnuts.

**Common poppy:** Seeds can be easily shaken out of the dry heads in September and are delicious on bread, rolls, cakes or biscuits or in a honey dressing, but will unfortunately not get you high.

## SEAWEED

**Kelp (oarweed):** Often found attached to small stones on muddy and sandy flats. Strips of young kelp used to be sold in Scotland as 'tangle', described as tasting like peanuts. It can also be made into a jelly.

**Kelp (sea belt):** This species has a long unbranched blade with wavy edges and may grow up to four metres long. Dried fronds are used to forecast rain, as they take in water and become limp as air humidity increases; they can be eaten raw in salad.

**Laver:** Very common in Britain, this is a broad, tough, irregular frond about 20 centimetres across and purplish-red in colour. In Japan it is used in soups and stews, in Britain for laverbread and laver sauce for mutton. Laverbread is a purée of the weed that is rolled in oatmeal and fried in bacon fat.

### SOME PICKING RULES

- Never strip a plant completely.
- Never take the flowers and seeds of annual plants: they rely on them for survival.
- Never pull up whole plants.
- It is unwise to gather any sorts of produce from areas that may have been sprayed with insecticide or weed killer.
- Avoid, too, the verges of heavily used roads, where the plant may have been contaminated by exhaust fumes.

Source: Food For Free by Richard Mabey (Collins)

## WILDFLOWERS TO LOOK OUT FOR IN SEPTEMBER:

**Fairy flax:** A delicate annual of cliff-tops and sand dunes with forked stems carrying white, five-petalled flowers. Also called purging flax, due to its past use as a purgative.

**Lady's bedstraw:** Square stems grow up to 80 centimetres tall with clusters of scented yellow flowers. A herb that thrives on sand dunes, heaths and grasslands and was used as stuffing for mattresses in the past.

**Skullcap:** Its blue, tubular flowers are two-lipped with white markings, and its leaves are toothed with heart-shaped bases. Found in damp woodlands, meadows and by streams.

**Dove's-foot crane's bill:** Of the geranium family, with hairy stems and small pink flowers that have five-notched petals. Grows in arable and waste land.

**Selfheal:** A perennial herb growing on grass and waste lands that can be used to heal wounds and stop bleeding. Has deep bluish-purple flowers gathered in dense heads with oval leaves in opposite pairs.

Source: Wild Flowers: an easy guide by habitat and colour (Green Earth Books) by Tracy Dickinson



Dove's-foot crane's bill

GREEN PAGES IN SEASON

# SEASONAL RECIPES FOR SEPTEMBER

Ripe and juicy tomatoes dominate this month's menu.

By **Hugh Fearnley-Whittingstall**

In a good year, September is the culmination of all summer's promises, and the garden remains highly productive throughout the month.

Although this makes it difficult to choose a 'veg of the month', tomatoes get my vote – they can be roasted, puréed and frozen in great quantities for use in soups, stews and pasta dishes through the winter and spring. And they are the basis of my chutney (or glutney, as I like to call it), which I make every year to finish up the garden glut – including the courgettes, or rather marrows, which just keep on coming.



September is also a good month for killing a steer. They are in prime condition after a summer of fattening on the grass. I hang my beef for a full month at the abattoir, and sometimes hang a fore-rib joint for a further two weeks in the cool, airy meat safe in our kitchen wall. But the offal should be cooked at once – and River Cottage HQ chef Gill Meller provides a great liver recipe for you to try.

## HUGH'S ROAST TOMATO PURÉE, BECOMING CHILLED TOMATO SOUP WITH PESTO

(serves four)

*This rich purée is one of the best and simplest products of the tomato glut, and can be frozen in great quantities for use in soups, stews and pasta dishes through the winter and spring. Turning the freshly made purée into a great summer soup is easy peasy, and the pesto garnish sharpens it up into something really special.*

**Ingredients:** Two kilograms of good, ripe tomatoes; three to four cloves of garlic; salt and pepper; sugar; olive oil; stock and seasoning for the soup  
For the pesto: Fresh basil; one clove of garlic; pine nuts; olive oil; Parmesan cheese

**How to make:** Slice the tomatoes in half and place cut-side up on a baking tray in a single layer. Bruise and roughly chop the garlic and scatter it over the tomatoes. Season well with salt and pepper, sprinkle with a pinch of sugar and trickle over a little olive oil. Roast in a moderate oven (180° centigrade/ gas mark four) for about 45 minutes, until the tomatoes are well browned and beginning to ooze juice. Remove from the oven and leave to cool for a few moments. Place a sieve over a bowl and rub the tomatoes through it to extract all the juice and flesh. You can freeze the purée at this stage for all kinds of uses.

Making the soup is just a matter of fine-tuning the purée with stock and various seasonings. First it's worth deglazing the syrupy, sticky juices in the baking tray by stirring in a little hot stock (vegetable, chicken or beef) or water, then adding these juices to the sieved tomato pulp. Tomatoes vary in juiciness and flavour, so taste the mixture and adjust the seasonings as necessary. Thinning with a little more stock or water will help produce the flavour and consistency you want. You can adjust acidity and

PHOTOGRAPH BY SIMON WHEELER

sweetness with a squeeze of lemon or another pinch of sugar. When you're happy with the soup, place the bowl in the fridge and chill for at least four hours (or place the bowl in a larger bowl of ice and water and stir occasionally).

For the pesto, pound or chop together a good fistful of basil, the garlic and a handful of lightly pan-toasted pine nuts, until you have a fine-grained pulp. Stir in two tablespoons of olive oil. You can add one to two tablespoons of freshly grated Parmesan if you like. Leaving it to stand for an hour or two will help mellow the harsh edge of the raw garlic.

To serve the soup, ladle it into chilled bowls and trickle a generous tablespoon of the pesto over each portion.

### HUGH'S TOMATO AND BREAD SALAD

(serves four)

*This is a version of the classic Italian dish panzanella, with which the ripest possible tomatoes are tossed with stale bread, olive oil and various other goodies. For me it's a way of celebrating my best, juiciest slicing tomatoes, which usually come good in the polytunnel early this month – varieties such as Big Boy, Marmande and the superb Italian ones Cuor di Bue (Ox Heart) and Costoluto Fiorentino, (seeds available from Seeds of Italy; tel: 020 8930 2516). Hence the 'pizza-style' presentation, with the various components scattered over a base of luscious tomato slices.*

**Ingredients:** One kilogram of tomatoes; flaky salt; ground black pepper; olive oil; coarse country bread; one small tin of anchovies in oil; vinegar; one large red onion; black olives; capers from a jar; fresh basil

**How to make:** Choose the ripest, tastiest slicing tomatoes you can get. Slice them horizontally, about half to one centimetre thick, discarding just the coarse, stalky slice from the top. Cover four plates with slightly overlapping slices of tomato.

Season sparingly with flaky salt and freshly ground black pepper, then less sparingly with a trickle of good olive oil.

Tear up four thick slices of the bread. Open the anchovies and toss the bread with the oil from the tin, another tablespoon or so of good olive oil and a sprinkling of good aged vinegar, such as balsamic. Leave to macerate for at least half an hour, tossing again every few minutes. Meanwhile, separate the anchovies and slice them in half lengthways, if you like. Slice the red onion very finely and separate the slivers with your fingers. Stone a couple of dozen black olives. Take about one tablespoon of capers and drain off the vinegar. Tear up at least a dozen basil leaves. Scatter all these ingredients over the sliced tomatoes, dividing them roughly equally between the four plates.

### GILL MELLER'S BRUSCHETTA WITH TOMATOES, DORSET BLUE VINNY AND CHILLI CONFIT

(serves four)

*This slightly unusual but hugely satisfying combination of flavours is worth trying out. Use freshly sliced ripe varieties of tomato such as Borghese plum, Alicante or Brandy Wine. Dorset Blue Vinny is a blue-veined cow's-milk cheese, but you can substitute with any strongly flavoured Stilton.*

**Ingredients:** Six mildish chillies (such as whippet's tail); olive oil; one teaspoon of thyme leaves; two garlic cloves; four slices of bread; four ripe tomatoes, washed and sliced; 200 grams of Dorset Blue Vinny cheese; salt and pepper

**How to make:** Slice the chillies open from tip to tail, remove the seeds with a spoon and discard. Slice them into strips and place in a small sauce pan, cover with olive oil, throw in a few thyme leaves and a clove of garlic with its skin on and cook on the most gentle of simmers until soft (for roughly 25 minutes). Remove the

## IN SEASON GREEN PAGES

pan from the heat and allow the chilli confit to cool.

Pre-heat the grill, drizzle a little of the chilli oil from the confit over the bread and toast for a couple of minutes on each side. When toasted, rub the bread over with a clove of garlic. Then lay the sliced tomatoes on the bruschetta, cover with pieces of the blue cheese and flash under the grill until bubbling. Place on plates, season and spoon over the chilli confit. Serve as a late Sunday snack.

### GILL'S SALAD OF GOAT'S CHEESE WITH TOMATO COMPOTE DRESSING

(serves four)

**Ingredients:** Four slices of bread from a baguette; olive oil; 400 grams of soft goat's cheese; 250 grams of small ripe tomatoes; half a garlic clove; one teaspoon of sugar; one teaspoon of mustard; one tablespoon of cider vinegar; salt and pepper; 300 grams of washed summer salad and herby leaves

**How to make:** Toast the bread slices with a little olive oil rubbed on each side. Divide the goat's cheese into four and stack onto the toasts. Halve the tomatoes and finely chop the garlic. Heat a small frying pan, add a little olive oil, the tomatoes and the garlic and cook over a medium heat for eight to 10 minutes or until the tomatoes are beginning to soften. Add the sugar, mustard, vinegar and salt and pepper (to taste) and cook for a further two minutes. The dressing should be quite loose, so don't overcook it, and if you think it's a bit dry add a drop of water. Toast the bread and goat's cheese until bubbling. Toss the salad leaves in a little French dressing and divide between four salad bowls or plates. Set the bubbling cheesy croutons beside the salad and spoon over the warm tomato dressing.

### GILL'S TOMATO AND BASIL ICE CREAM

*Some people don't really like the 'nightshade' flavour of this ice cream.*

## GREEN PAGES IN SEASON

*Others rave about it. You decide.*

**Ingredients:** 500 millilitres of unpasteurised double cream; 500 millilitres of milk; 12 large egg yolks; sugar to taste (start with 150 grams); one kilogram of very ripe tomatoes; 15 basil leaves

**How to make:** Start by making a custard: this is the ice cream base. Scald the milk and cream together. Beat the yolks and sugar. Infuse the hot milk and cream with the basil for a few minutes before removing the leaves and then adding the liquid to the yolks and sugar. Juice the tomatoes in a machine or liquidise them and rub the purée through a sieve. Churn the basil custard in an ice cream machine until starting to thicken, then add the tomato juice and continue to churn until frozen. Great in a cone or served with warm carrot cake.

## TO USE UP THE SEASONAL GLUT

### HUGH'S GLUTNEY

(to make about 10 jam jars' worth)

*This is a 'multiple choice' recipe for chutney, designed to help you use whatever seasonal fruit and vegetables are in full glut at the time. For me, the courgettes/ overgrown marrows are pretty much a staple in August and September, and they may give way to pumpkins and squashes in October and November. Tomatoes*



*and plums are around at roughly the same time, though the tomatoes will start early – particularly if you use green ones.*

*Of course, no two batches of glutney will ever be quite the same – but that hardly matters. You should also feel free to play fast and loose with the spice bag. And if you like a really hot chutney, add as much dried chilli as you dare.*

*Serve with cheese, cold meats, terrines, pork pies, etc. But also remember what a useful ingredient chutney is, with a ready-mixed blend of sweet, sour and spice. I frequently add it to curries, soups and stews.*

**Ingredients:** One kilogram of marrows/ overgrown courgettes or pumpkin: one kilogram of red or green tomatoes or plums; one kilogram of cooking or eating apples; 500 grams of onions; 500 grams of sultanas or raisins; 500 grams of light brown sugar; 750 millilitres of white wine or cider vinegar; one to three teaspoons of dried chilli flakes, depending on your taste for heat; one teaspoon of salt; a square of muslin or cotton; a thumb-sized nugget of fresh or dried ginger, chopped; a dozen cloves; a dozen black peppercorns; a generous teaspoon of coriander seeds and a few blades of mace

**How to make:** Marrows or courgettes should be unpeeled but cut into dices no bigger than one centimetre in size (discard seeds from really large marrows); while pumpkin should be peeled, have its seeds and soft fibres discarded, and similarly diced. Tomatoes should be scalded, skinned and roughly chopped; while plums just need stoning and chopping. Peel and dice the apples and onions. Put the vegetables and fruit in a large, heavy-based pan with the sultanas or raisins, the sugar, the vinegar (made up to one litre with water), the chilli flakes and the salt. Make a spice bag by tying the spices in a square of muslin or cotton. Add the spice bag to the pan, pushing it into the middle.

Heat the mixture gently, stirring occasionally to dissolve the sugar,

and bring slowly to the boil. Simmer for two to three hours, uncovered, stirring regularly to ensure it does not burn on the bottom of the pan. The chutney is ready when it is rich, thick and reduced, and parts to reveal the base of the pan when a wooden spoon is dragged through it. If it starts to dry out before this stage is reached, add a little boiling water. Pot up the chutney while still warm (but not boiling hot) in sterilised jars with plastic-coated screw-top lids (essential to stop the vinegar interacting with the metal). Leave to mature for at least two weeks – ideally two months – before serving.

### 'COCKTAIL' OF THE MONTH: BLACKBERRY WHISKY

*Another fruit-flavoured spirit in the sloe-gin mould – and one of the very best. This recipe comes from that doyenne of the farmhouse kitchen, Prue Coates.*

**Ingredients:** Two kilograms/ four pounds of blackberries; 225 grams/ eight ounces of sugar (or less according to taste); one bottle of whisky

**How to make:** Place the fruit, sugar and whisky in a large screw top or Kilner-style jar. Shake every few days until the sugar has dissolved. Place in a dark cupboard for three months, turning slowly to mix once every two weeks or so. Strain and bottle. The whisky will have turned a deep, dark purple. It can be drunk straight away, but the flavour will continue to

### GILL'S FRESH BEEF LIVER WITH SLOW-COOKED SHALLOTS AND PORK BELLY

(serves four)

*We served this at River Cottage HQ to 50 people recently and every plate came back clean. Beef liver, if under-fresh or over-cooked, can lead to serious disappointment. But a well-sourced fresh liver (and I mean 24 hours out the animal fresh) can be sublime. The liver should be served pink – seared quickly in a hot pan and not stewed*

with the shallot and bacon.

**Ingredients:** 400 grams of cured pork belly or bacon lardoons, diced into one-centimetre pieces; 12 shallots, peeled and halved (leave the roots intact so the bulbs don't separate); 200 millilitres of red wine; 500 millilitres of beef or chicken stock; four sprigs of thyme; salt and pepper; 500 grams of very fresh beef liver; olive oil

**How to make:** Heat a medium-sized saucepan, add the bacon and sauté until it starts to render a little fat. Add the shallot halves and colour gently for five minutes. Pour in the wine and reduce by half. Then add the stock (just enough to cover the shallots) thyme and pepper and simmer until the shallots and bacon are tender (for about one hour).

Using a slotted spoon, remove the shallots and bacon from the pan and set them aside in a warm place. Skim any fat from the surface of the cooking liquor, turn up the heat and reduce by half. Return the onions and bacon to the sauce. Taste and season if necessary. Remove the fine skin that covers the liver and trim any ventricles (or strange looking bits) away. Slice into one-centimetre thick pieces (the slices should be about the size of half a piece of toast). Season with salt and pepper.

Heat a frying pan until very hot, add a little oil and the sliced liver, cooking each side for a max of one minute and no more. Place the liver onto warmed plates and spoon over the shallots, bacon and sauce. Serve with mash or a summer salad.

## RIVER COTTAGE COMPETITION

After slaughtering his Devon Ruby steer in September, Hugh will hang it for a full month at the abattoir. In October, he'll bring the carcass home to butcher it – with his pal and River Cottage butcher, Ray Smith. It takes the best part of a day to do the job, but they do break for lunch (sirloin for Hugh, while Ray has been known to manage a T-bone).

This October, you can win the chance to share a similar butchery experience with Ray. On **3 October**, Ray and River Cottage HQ chef Gill Meller will be hosting a special 'Pig in a Day' event at River Cottage HQ. Ray worked closely with Hugh on *The River Cottage Meat Book* ([www.rivercottage.net/rcv2/shop/index.jsp](http://www.rivercottage.net/rcv2/shop/index.jsp)), and is now a regular teacher at River Cottage HQ. An expert, with many years' experience, he will demonstrate how to get to grips with the carcass of a whole pig. You will learn the principals of butchering and processing a pig and be given practical, hands-on, assistance in making your own air-dried



hams, brine-cured hams, brawn, bacon, sausages, chorizos and salamis. Again, it will take the best part of a day to do the job, but you too will break for a superb lunch: roast pork cooked by Gill and his team.

For your chance to win, simply log onto [www.rivercottage.net/ecologistpiginadaycompetition](http://www.rivercottage.net/ecologistpiginadaycompetition)

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## GREEN PAGES WINE

Up in the fennel hills of Roussillon, Eric Laguerre's organic vineyard produces some of the most price-competitive wines southern France has to offer

# DOMAINE LAGUERRE

Sceptics of 'wines produced from organically grown grapes' – to give 'organic wines' their legally defined term within the EU – come in two forms. The first are the consumers who say that organic wines are more expensive than their conventional counterparts and that the difference in quality does not justify even the small price premium that organic wine usually commands. The second group of sceptics are the dyed-in-the-wool wine producers who say that it is impossible to farm vines without chemically synthesised fertilizers, fungicides, pesticides and weedkillers – both if the vineyard is to be protected from diseases and if it is to be farmed profitably.

Well, sceptics from both camps should pay a visit to Eric Laguerre, owner-winemaker of Domaine Laguerre in the up and coming Roussillon region of southern France. Laguerre's vineyards are less than one hour's drive from



Perpignan. They lie in the *Coteaux des Fenouillèdes* – 'the fennel hills', named for the abundance of fennel that grows wild there. Until 2000 Laguerre sent all of his grapes to the wine cooperative in his local village of St Martin de Fenouillet. Then a meeting with Roussillon's organic winemaking superstar, Gérard Gauby of Domaine Gauby (to be featured in a future *Ecologist* column), convinced Laguerre not only to start to bottle his own wine, but to do it in an environmentally respectful way.

Laguerre immediately put his vineyards under organic certification (*Ecocert France*) and began working his vineyards in a more holistic way. He

allows weeds – like wild fennel – to grow between the vines because they encourage beneficial predators of vineyard pests. Wild fennel, for instance, is an antagonistic plant to local leafhopper insects whose saliva carries a virus deadly to vines. Laguerre says: 'In some parts of Roussillon the government forces growers to spray noxious chemicals to kill the leafhopper to protect the vineyards. The sprays are applied by helicopter and are very inaccurate as here it is quite windy. They can land on private homes, plus they wipe out beneficial insects like ladybirds and typhlodromus mites, which eat the red spider mites that damage the vine trunks.'

This makes them counterproductive and environmentally unsound.

'Good organic practice is all about prevention rather than cure. We find that by letting nature make its own balance – for instance, by leaving the local vegetation like the wild fennel intact – we help prevent problems from occurring needlessly. When replanting old vineyards we leave all the surrounding trees as habitat for local birds. Sure, we lose a few grapes to the birds, which eat them near harvest, but we know that the birds eat grape berry moths, whose larvae burrow into the grape skins and turn the juice vinegary. It's a trade-off: we're happy to lose a few grapes to not have to spray chemicals.'

Instead, Laguerre sprays teas made from plants like nettles, camomile, ferns and garlic on the vines. 'If you let nettle leaves soak overnight in water the resulting solution provides iron for the vine leaves to stop leaf yellowing, or chlorosis – which is common when you have limestone in the subsoil, as we do here. We also use dandelion for its silica content. Silica is needed if the vine shoots are to grow firm and strong towards the light of the sun, without which we won't get ripe grapes come harvest in September or October. And garlic tea is super in August because it smells so strongly it confuses the insects looking for food like our ripening grapes. But you must be careful not to spray it too close to harvest, otherwise the wine will smell like garlic purée.'

In fact, Laguerre's wines – a red and a dry white called *Le Ciste* after the cistus shrub that grows in the scrub around the vineyard – are characterised by their refreshing, clean aromas of fruit, flower and mineral. 'It is very important to harvest clean, healthy grapes,' he says, 'if you want pure-tasting wines. We remove water shoots from the vines in summer. Water shoots are small leaves that grow between the grape bunches and the vine's biggest leaves; [they] don't really help catch any of the sunlight the vine needs to convert via photosynthesis into sugar. In fact, water shoots actually block sunlight from the grapes, which reduces ripeness; and as they are unusually soft in texture, they produce a lot of moisture and humidity within

the vine canopy, which makes attack by fungal diseases more likely. Removing water shoots by hand is time-consuming – about 20 man hours per acre. This increases our labour costs, but it means we don't have to spray chemicals, which then saves us money, and we get much better-quality grapes.'

Growing at about 500 metres altitude, Laguerre's vines are some of the highest in Roussillon. 'We are between the Corbieres mountains and the Pyrenees,' he says. 'So we get plenty of dry winds. These also help minimise disease and dry the grapes if it rains, allowing us to pick as late as possible for maximum ripeness. Removing the water shoots really allows us to take advantage of what mother nature gives us for free, because thinning the vine's leaf canopy allows much freer passage of air through the vine's branches and the grape bunches. Grapes need lots of air and sunlight if they are to thrive.'

Laguerre also works in harmony with nature in the winery, preferring to use gravity than mechanised pumps as much as possible. 'All our grapes are hand-picked. For whites we press the grapes at ground level and run the juice into barrels in our underground cellar for fermentation. The cellar is cool enough for us not to need to install environmentally damaging air-conditioning systems, and means our whites can ferment slowly. If it is too hot they ferment too quick and lose their freshness and elegance. For reds we put the grapes in the vats, and then after fermentation we run the red wine again by gravity into barrels for ageing.'

Most of the barrels chez Laguerre are 300 litres instead of the usual 225 litres, which means the wines pick up fewer woody flavours, the oak being used simply to help soften the wines up before bottling. 'We don't need to blast our wines with new oak,' he says. 'We want you to experience the taste of our grapes when you drink our wines.'

By working with nature, by minimising costly toys like new barrels and by doing most of the work in the vineyard himself Laguerre's prices are among the most competitive in Roussillon – another thing for the organic sceptics to bear in mind.

## WINE GREEN PAGES

### WINE RECOMMENDATIONS



#### Domaine Laguerre 'Le Ciste' Côtes du Roussillon white

A blend of four grapes: the peachy Marsanne, the buttery Roussanne, the earthy Grenache *blanc* and the sprightly Rolle. The keys to this dry white wine are its refreshing zip on the palate, which comes from growing vines in the mountains where nights are cool, and its rich but finely focused flavours of citrus and wet stone. Vanilla-like oak flavours are very much in the background.

**Stockist:** Philglas & Swiggott, London, 0207 9244494; Anne et Vin, Nottinghamshire, 01636 700900

**Price:** £10.99



#### Domaine Laguerre 'Le Ciste' Vin de Pays des Côtes Catalanes Rouge

Another blend of four grapes: the juicy red-fruited Syrah, the blackcurrant-like Cabernet Sauvignon, the blackberry-flavoured Grenoir and the tarry Carignan. The keys to this dry red are the layered tannins you feel on the palate, which create satisfying waves of flavours, and the hedgerow wildness of its fruit flavours.

**Stockist:** Same as above

**Price:** £10.99

### CONTACT DETAILS

**Domaine Laguerre**

**Le Village, 66220 St Martin de Fenouillet**

**Tel 04 68 59 26 92; email [domaine.laguerre@free.fr](mailto:domaine.laguerre@free.fr);**

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**GREEN PAGES IN SEASON**

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# SEAFOOD OF THE MONTH OYSTERS

**Robin Wright** (below) of shellfish specialist the Wright Brothers introduces the sensual world of the oyster, and **Mitch Tonks** (over) offers tempting variations on a raw theme

## OYSTER FACTS

■ There are essentially two types of oyster sold in this country. The first is the native or flat oyster, known as the *belon* in France; this oyster is indigenous to our shores and is considered by many to be the finest oyster in the world. The second is the Pacific rock oyster, which was introduced into Europe in the early 1970s to replace the Portuguese rock oyster. The native oyster grows for four to five years before it is a good size to consume, whereas the rock oyster takes about three years.

■ Oysters are very low in calories and packed full of vitamins and minerals. They contain vitamins A, B1, B2, C and D, zinc, calcium, magnesium, iron, potassium, copper, sodium, phosphorous,

magnesium and sulphur. In Dickens' time, millions of oysters were consumed in this country, particularly by the less well-off, as a way to remain healthy.

■ There is sound reasoning behind the adage about not eating oysters when there is an 'r' in the month. Historically, before the advent of trains allowed speedy transportation and refrigeration, the months of May, June, July and August were too warm for storing or transporting oysters; so they were generally not consumed then. There is also legislation protecting native oysters during these four months to safeguard stocks and allow them to replenish. The beginning of the native oyster season is celebrated on 1 September each year.

■ Many oysters from southwest France go through a process of *afinage* or finishing. They are taken from the beds where they have grown and laid in *claires* – marshy lakes containing a mixture of salt and fresh water. This process creates the most succulent oysters, which have an amazing clean and nutty flavour. These oysters are called '*fines de claires*' or '*speciales de claires*' depending on how long they spend, and the amount of them, in the *claires*.

■ Oysters have always been linked with love. Aphrodite, the Greek goddess of love, emerged from the sea on an oyster shell and promptly gave birth to Eros. Thus, the word 'aphrodisiac' was born. Casanova is said to have eaten 50 raw oysters every morning in the bath, together with the lady of the moment.

■ Oysters are best consumed direct from the shell. Be sure to chew and properly taste the flesh of the oyster rather than just swallow it. Popular accompaniments are a squeeze of lemon, a dash of Tabasco or little chopped shallots in vinegar.

■ To make sure oysters are fresh and good to eat, first find a reputable source; then make sure the shells are tightly shut and not gaping at all; finally, when they are opened, they should contain some juice and not be dried up.

■ Oysters are best kept refrigerated at between four and six degrees centigrade. Placing a damp tea towel or cloth over them helps keep them in good shape.



PHOTOGRAPH BY PETER CASSIDY

## GREEN PAGES IN SEASON

### MITCH TONKS' OYSTER RECIPES

#### TEMPURA OYSTERS WITH CHILLI, MINT, LIME AND CORIANDER

**Ingredients:** Two finely chopped shallots; one stick of lemon grass bashed and finely sliced; one inch of root ginger peeled and chopped; three kaffir lime leaves finely shredded; the juice of two limes; one heaped tablespoon of finely chopped coriander; one heaped tablespoon of finely chopped mint; one tablespoon of caster sugar; 50 millilitres of cold water; one hot chilli finely sliced; fish sauce; four tablespoons of cornflour; two tablespoons of plain flour; a pinch of salt; oil for frying; six Pacific oysters, opened; 200 millilitres of ice-cold sparkling water

**How to make**

First make some dipping sauce. Mix together the shallots, lemon grass, ginger, lime leaves, lime juice, coriander, mint, sugar, cold water, chilli and fish sauce and leave to infuse for five to 10 minutes. Make some batter by mixing the flours and salt together and adding enough water until you have a double-cream consistency.

Heat the oil in a wok until it reaches 190° centigrade, then dip the oysters into the batter and fry for two to three minutes, being careful not to let them stick together. Serve them back in their shells with the dipping sauce on the side.

#### OYSTER ROCKAFELLA (serves four)

**Ingredients:** Two dozen oysters, opened; 250 grams of butter; four shallots, finely minced; one stick of celery, minced; a small handful of chopped chervil; a small handful of chopped parsley; 200 grams of spinach; a handful of breadcrumbs; a dash of Pernod; a good splash of Worcestershire Sauce; salt and pepper

**How to make**

Crumple up some tin foil in the bottom of a roasting tray so the oysters can sit comfortably on it without spilling any of their juices. In a couple of tablespoons of the butter, sweat the shallots, celery, chervil, parsley and spinach until softened. Put into a food processor with the remaining butter, the breadcrumbs, Pernod and the Worcestershire Sauce. Blend until smooth. Season with plenty of black pepper and a tiny amount of salt. Put a tablespoon of the mixture on top of each oyster and bake or grill for three to four minutes until the butter has melted and the tops of the oysters are crisp and golden.

■ You can get an amazing choice of fresh fish and shellfish at each of Mitch's FishWorks restaurants and fishmongers in Bath, Bristol, Christchurch and London, or from the FishWorks home-delivery service. See [www.fishworks.co.uk](http://www.fishworks.co.uk) or call 01225 329342 for further details and for information on FishWorks' cookery schools



## HOW TO KILL CRABS AND LOBSTERS HUMANELY

In the May issue we ran a recipe that called for the slow boiling of live crabs. We were under the commonly held impression that this was the most humane method of cooking large shellfish. Following the article's publication, however, we received a letter from the animal-welfare group the Shellfish Network, which pointed out that this practice is needlessly cruel and not necessary to ensure crabmeat remains fresh.

According to experiments carried out by the late Dr John Baker for the Humane Education Centre, death by slow boiling can take up to seven minutes for lobsters. Baker wrote: 'The experiments I recorded give no support to the opinion that slow heating results in the gradual and peaceful onset of unconsciousness. On the contrary, the animal becomes active and seeks at first to get away by normal locomotion; abnormal movements then supervene, and violent flips are usually witnessed as the lobster tries to escape.'

According to the Shellfish Network (which doesn't advocate the eating of shellfish at all), there are two much more humane methods of killing crabs and lobsters. One is to freeze them for two hours before cooking, and then to put them directly into boiling water. The other method is to kill them by severing their central nervous system; but knowing where to put the knife takes precision and practice, so this should be left to your fishmonger.

If you visit a fishmonger or a restaurant that doesn't kill crabs or lobsters using this second method, you can help educate them either by contacting the Shellfish Network for its detailed fact sheets or by giving the network the address of the fishmonger/ restaurant and it will get in touch with them direct.

■ For more information, contact Julie Roxburgh at the Shellfish Network on 01483 282995; email: [springside@connectfree.co.uk](mailto:springside@connectfree.co.uk)

PHOTOGRAPH COURTESY OF FISHWORKS PLC



FASHION GREEN PAGES

# THE MOST ETHICAL SHOE IN THE WORLD

The Blackspot Anticorporation was set up by media activists **Adbusters** to provide a shoe for consumers seeking an alternative to corporate brands like Nike. Blackspot's latest design, the Unswosher, has just been launched in the UK

## THE SHOES

The Unswosher is made from 100 per cent organic hemp. The sole is made from recovered car tyres. The shoe's white anti-logo and red splotches are hand-painted, and the soles are stitched, glued and embedded for extra durability. The Unswosher complies with vegan standards, and is being monitored by Robin Webb of the British company Vegetarian Shoes.

## THE FACTORY

The Blackspot factory is located in Felgueiras in rural Portugal. The region has a 400-year shoe-making tradition. The factory has been owned and operated by the same family for three generations. Its owners have a reputation for being excellent employers. The factory's machinery is new, and working conditions are of a high standard: air quality is good; the premises are spacious and well lit; sound-level compliance is strictly enforced, and music is audible wherever you go. It is, the plant's union rep says, a model factory with a near-perfect safety record. Employees work from 8am to 6pm and get one and a half hours off for lunch. A doctor visits the factory twice a week, and workers are entitled to unlimited free consultations.

## THE PROFITS

The Blackspot Anticorporation is a for-profit venture, which enables Blackspot to pursue its campaigning agenda. As it says on its website: 'For round one, we'll launch our TV campaign, and if any network refuses to sell us airtime we'll haul them into court.

Then, if this recycled-tyre, organic-hemp Unswosher really takes off as a new kind of cool in the sneaker industry, we'll use every penny of profit on kick-ass social campaigns and anti-corporate marketing. The best part is that it'll be up to the shareholders of the Blackspot Anticorporation to brainstorm and decide on how we do it. Do we go after McDonald's? Do we target ExxonMobil with full-page ads in *The New York Times*? Or maybe we launch an anti-trust lawsuit against [media conglomerate] Viacom, or we put our money into Blackspot start-ups in other industries...'

## WAGES

The minimum wage in Portugal is 365 euros per month. Workers in Blackspot's factory earn between 420 and 700 euros per month, depending on their job. In addition to their basic salary, workers receive 25 paid days off and two extra months of pay per year.

## UNIONISATION

Union dues are 1 per cent of members' salaries, and about 40 per cent of workers are union-registered. Not everyone chooses to belong to the union, as many employees don't see any need for it. The union gets involved in wage negotiations when necessary, and provides workers with legal representation when required, but is mostly there to provide protection against unfair dismissal. According to the workers we spoke with in private, no one has ever been unfairly dismissed from this factory. The workers told representatives of

Blackspot that the factory is one of the best in Portugal. They also said that the only factories in Portugal that are totally unionised are those under foreign ownership, whose workers feel more vulnerable than those working for local or community-based employers. We met with employees who belong to the union; we met with workers who liaise between employees and the union; we met with union staff and staff of the government-run umbrella organisation that administers the union. All meetings were in private. All the people we interviewed were unequivocal in their praise of the factory.

## THE FUTURE

Blackspot aims to create a viable alternative to multinational brands. Its CEO, Kalle Lasn (who is also the editor of *Adbusters* magazine), says: 'Together, we'll revolutionise footwear, and then move on to 'Blackspot' other industries – big music, fast food, coffee shops, clothing. Marrying a passion for social activism with grassroots antipreneurial zeal, we'll rearrange the ugly face of corporate capitalism.'

## STOCKISTS

Blackspot shoes are sold only in independently owned retail stores. To find your nearest retailer, go to <http://adbusters.org/metasp/corpo/blackspotsneaker/retail/>.

■ This article is an edited version of text already circulated by Adbusters

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A Cumbrian company's wool insulation can help you cut your fuel bills, reduce your contribution to climate change and help struggling hill farmers, too

Just under half of CO<sub>2</sub> emissions in the UK come from the energy used in the nation's buildings. Furthermore, as our houses are often three times less efficient than, for example, German homes, the average house currently loses a quarter of the heat generated to warm it through its roof.

Although 72 per cent of all houses in Great Britain do have some loft insulation, most would benefit from more. If every house in the UK installed up to 250 millimetres (10 inches) of insulation, the equivalent financial savings would pay the energy bills of 600,000 families for a year. The only catch is that most insulation is made from artificial, and often highly toxic, materials.

One of the best natural alternatives is wool. But when Christine Armstrong set out to use wool to renovate her 17th-century Cumbrian farmhouse, she found that, despite the abundance of sheep in Cumbria, she would have to import the wool from overseas; the coarse wool from nearby Cumbrian highland sheep was simply going to waste.

This led her and business partner David Baldry to set up Second Nature and create Thermafleece, an insulation material made entirely of British wool. Not only does Thermafleece reduce damp and 'sick building syndrome', it also provides a lifeline for Cumbrian sheep farmers, devastated by both foot and mouth, and the collapse of the Russian sheepskin market.

## HOW THERMAFLEECE WORKS

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■ Because of its ability to rapidly absorb and release water vapour, Thermafleece wool insulation can help to keep buildings cool in summer and warm in winter. When the outside temperature increases and begins to heat the wool, it releases moisture; that has a cooling effect on the fibre which reduces the flow of heat to the inside of the building. This can reduce peak temperature by up to 7° centigrade more than alternative forms of insulation. In winter, the absorption of moisture by wool insulation can increase peak temperature by up to 4°c centigrade more than alternative forms of insulation.

■ Thermafleece's manufacturing process consumes minimal energy. Thermafleece uses only 14 per cent of the embodied energy that is used to manufacture glass-fibre insulation, therefore paying back its manufacturing energy cost seven times faster than glass fibre.

■ It can be installed without gloves or protective clothing. It is not irritating to the skin, eyes or respiratory tract and causes no discomfort to site workers during installation. Any fibres which happen to reach the living space will present no hazard to health. Insect proofing and fire resistance are achieved by the inclusion of naturally derived additives.

■ The fibre adapts to the shape of rafters, joists and studs to provide a permanently tight fit. Properly installed, Thermafleece

will retain its low density and thermal performance – with a life expectancy similar to that of the construction in which it is installed.

■ Thermafleece is lightweight and easy to handle and install. The material can be easily cut to shape and size with a sharp knife.

■ It causes no irritation to the skin, eyes or respiratory tract. When installing the product in confined areas a dust mask is recommended to prevent inhalation of existing dust.

■ Wool has a higher fire resistance than cellulose and cellular plastic insulants; it does not burn but rather melts away from an ignition source and extinguishes itself.

■ At the end of its useful life, Thermafleece can be recycled for other environmentally friendly applications. It also contains no permethrin, pyrethroids, pesticides or formaldehydes.

### WHERE CAN YOU BUY

**THERMAFLEECE** For more information got to the Second Nature website at [www.secondatureuk.com](http://www.secondatureuk.com), or call **01768 486285**. The company also offers discounts to community groups and charities.



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**DIRECTORY GREEN PAGES**

# Essential directory

The Ecologist's guide to ethical businesses and organisations

## BABY

**Make the first 21 months of your child's life calmer and easier by cutting down on clutter and making sure everything you buy is natural**

### ACCESSORIES

Beaming Baby.....	0800 0345 672
Born.....	0845 130 2676
Eco Babes.....	01366 387 851
Ecobaby Basics.....	01223 811 633
Ecotopia.....	01453 752 345
Heghog.....	0845 606 6487
Green Baby.....	0870 240 6894
Golden Lamb Rugs.....	01600 740 252
Little Earthlings.....	02829 541 214
Little Green Earthlets.....	08701 624 462
Lollipop.....	01736 799 512
Muladula.....	01453 768 549
Natural Collection.....	0870 331 3333
Natural Nursery, The.....	0845 890 1665
SoOrganic.com.....	0800 1692579
Spirit of Nature.....	0870 725 9885

### CLOTHING

Baby Organics.....	020 8255 4040
Baby-O.....	0870 760 7552
Born.....	01179 245080
Clothworks.....	01225 309 218
Cut4Cloth.....	01326 340 956
Global Kids.....	01530 457 146
Gossypium.....	01273 488 721
Greenfibres.....	0845 330 3440
Greenscene.....	07813 282 566
Greensleeves Clothing.....	020 8458 1559
Healthy House, The.....	01453 752 216
Heghog.....	0845 606 6487
Huggababy.....	0870 046 4844
Natural Nursery.....	0845 890 1665
Nature's Fibres.....	01622 853 517
Organics for Kids.....	01865 311 410
People Tree.....	020 7739 0660
Schmidt Natural Clothing.....	0845 345 0498
Su Su Ma Ma World Wear.....	01273 300 606
Texture.....	020 7241 0990
Tiny Sprout.....	01892 863 646
Tatty Bumpkin.....	01732 812 212

### FOOD

Baby Organix.....	0800 39 3511
Babynat Organico.....	01189 510 518
Hipp.....	0871 871 6611
Holle Baby Foods.....	01386 792 622
Mums 4.....	01926 771 285
Organico (see ad back cover ad).....	0118 951 0518
Truuuly Scrumptious.....	01761 239 300

### NAPPIES

**ECO DISPOSABLE**  
**Natural Baby Company .....01983 810 925**  
[www.naturalbabycompany.com](http://www.naturalbabycompany.com)

Naturebotts.....0845 226 2186  
 See Saw.....0131 2281939  
 The Bottom Line.....01543 250 810

**RE-USABLE**  
**Born .....0845 130 2676**  
[www.borndirect.com](http://www.borndirect.com)

The Nappy Lady.....	0845 456 2441
Natural Nursery.....	0845 890 1665
Nature Botts.....	0845 226 2186
Sam I Am.....	01522 778 926
Smile Child.....	0800 1956 982
Snazzypants.....	01522 778 440
Twinkle Twinkle.....	0118 934 2120

### NAPPY LAUNDRY SERVICES

Dinky Diapers.....	0117 986 6167
Nappy Ever After.....	020 7383 5115
Nappy Tales.....	01235 812 747
Natural Nappies.....	01376 563 787
Nifty Nappies.....	01420 549 659
Number1 for Nappies.....	01992 713 665
The Nappy Box.....	01423 358 571
The Scottish Nappy Company.....	0800 015 5570
Tops for Bottoms.....	0151 343 1356

### TOILETRIES

Earth Friendly Baby.....	020 8424 8844
Green People.....	08702 401 444

### TOYS

Arujo.....	01295 271 218
British Toymakers Guild.....	01225 442 440
Escor Toys.....	01202 591 081
Gaia Distribution.....	01225 484 472
Green Board Game Company.....	01494 538 999
Heghog.....	0845 606 6487
Holz Toys.....	0845 130 8697
in2play.....	0845 890 1392
Myriad.....	01725 517 085
Tatty Bumpkin.....	01732 812 212
Toys for Children.....	01594 824 007
Tulip Toys.....	01709 546 778

### ORGANISATIONS

Baby Milk Action.....	01223 464420
Real Nappy Association.....	01983 401959
The Nappy Lady.....	0845 4562441
Women's Environmental Network.....	020 7481 9004

## CAREERS & RECRUITMENT

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Charity Connections.....	020 7202 9000
Charity Job.....	020 8390 1177
Countryside Jobs Service.....	01947 896 007
Eden Recruitment.....	0870 787 7630
Ends Environmental Job Search.....	020 7814 5309
Environment Job.....	0161 282 0920
Environment Jobs.....	01977 690 698

The Ethical Careers Service.....	01865 245 678
Evergreen Resources.....	01256 314 620
Execucare.....	020 7761 0700
Getalife.....	0161 277 5200
The Green Group.....	01268 468 000
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Dunkerton's Traditional Cider and Perry.....	01544 388 653
Freedom Organic Beer.....	020 8748 0903
Fuller's Vintage Ale.....	020 8996 2085
Hambleton Ales.....	01845 567 460
Houston Brewery.....	01505 614 528
O'Hanlons.....	01404 822 412
Only Fine Beer.....	01245 255 579
Organic Brewhouse.....	01326 241 555
Pennard Organic Wines & Cider.....	01749 860 393
Smiles Brewing Company.....	01275 375 878
Skinner's Brewery.....	01872 271 885
St. Peter's Brewery.....	01986 782 322
Valhalla Brewery.....	01957 711 658
Weston's Cider.....	01531 660 233

#### COFFEE

The Bean Shop.....	01738 449 955
Burgil Coffee.....	020 8560 0263
Café Direct.....	020 7490 9520
Equal Exchange.....	0131 220 3484
Hampstead Tea and Coffee Co.....	020 8731 9833
More Organics.....	0173 636 6008
Organico (see ad back cover).....	0118 951 0518
Origin.....	01326 340 320
The Tea and Coffee Plant.....	020 7655 4574

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The Organic Spirits Company.....	01483 894 650

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Eleven O' Clock Tea.....	01635 278 648
E-Teas.....	0800 849 4039
Hampstead Tea and The Coffee Co.....	020 8731 9833
Nothing But Tea.....	0123 485 3855
The Tea and Coffee Plant.....	020 7655 4574

### WINE

Pennard Organic Wines & Cider.....	0174 986 0393
Sedlescombe Organic Vineyard.....	0800 980 2884
The Organic Wine Company.....	01494 446 557
Vinceremos.....	08001 0073086
Vintage Roots.....	0800 980 4992

## FOOD

**The following all supply delicious organic food. If we've missed someone you think is an organic food hero, please email us their details at [editorial@theecologist.org](mailto:editorial@theecologist.org)**

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#### BUTTER & CREAM

Yeo Valley.....	01278 652 243
Rachel's Organic Dairy.....	01970 625805

#### CHEESE MAIL ORDER

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Birdwood Farmhouse Cheesemakers.....	01452 750248
Caws Cenarth Cheese.....	0123 971 0432
Daylesford Organic.....	01608 731 700
Godminster Vintage Cheese.....	0174 981 3733
H.S. Bourne.....	01948 770214
Llanboidy Cheesemakers.....	01994 448303
Llangloffan Farmhouse Cheese.....	01348 891241
Loch Arthur Creamery.....	01387 760296
Staffordshire Organic Cheese.....	01782 680366

#### CHEESE PRODUCERS

Alhamwood Cheeses.....	01749 880 221
Caerfai Cheeses.....	01437 720 548

#### ICE CREAM MAIL ORDER

September Organic Dairy.....	01544 312 910
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#### MILK PRODUCER

Classic Organic – flavoured milk.....	01691 650450
Daylesford Organic.....	01608 731 700
Manor Farm Organic Milk Ltd.....	01300 341 415
Rachel's Organic Dairy.....	01970 625805
Yeo Valley.....	01278 652 243

#### YOGHURT

Rachel's Organic Dairy.....	01970 625805
Yeo Valley.....	01278 652 243

### FISH

**ORGANICO  
 0118 951 0518  
[www.organico.co.uk](http://www.organico.co.uk)**

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Organico.....0118 951 0518  
Tollhurst Organic Produce.....0118 9843 428

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**Buckingham**  
Right 2 Know .....01280 822 050

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**Royston**  
Guilden Gate Smallholding .....01763 243 960  
**Wisbech**  
Organic Connections International...01945 773 374

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**Chester**  
Organicfair.....01244 400 158  
**Lymm**  
Cheshire Organics.....01925 758 575  
**Malpas**  
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**Northwich**  
Stockley Farm Organics.....01565 777 492  
**Sale**  
The O Zone.....0161 291 8862  
**Warrington**  
Northern Harvest .....0845 602 3309

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**Saltash**

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**St Agnes**  
Tree Of Life Organics.....01872 552 661  
**St Austell**  
Cotna Organics.....01726 844 827  
**St Martins-by-Looe**  
Kevalar Farmers.....01503 250 135  
**Truro**  
Hendra Farm Organics .....01872 572 301

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**Brampton**  
Eva Botanicals.....01697 741 906  
Lady Jane's Tea Room .....07941 731 255  
**Grange over Sands**  
Howbarrow Organic Farm.....01539 536330

**DERBYSHIRE**

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Meynell Langley Organic Food...01332 824 815  
New House Organic Farm .....01335 342 429  
Adams, Nick.....01335 360 996  
**Chesterfield**  
The Organic Stores.....01244 881 209  
**Derby**  
Organic Pumpkin .....01332 370 254  
**Matlock**  
Beano's Wholefoods.....01629 57130  
**New Mills**  
The Organic Shop .....01663 747 550

**DEVON**

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Earthstar, Little East Lake Farm...01409 221 417  
Holsworthy Organics.....01409 221 417  
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West Hill Farm.....01271 815 477  
**Kingsbridge**  
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**Newton Abbot**  
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Woodland Organics .....01803 813 760  
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**Tavistock**  
Tamar Organics.....01822 834 887  
**Tiverton**  
Ms Kate Palmer .....01884 861 269

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**Blandford Forum**  
Gold Hill Organic Farm.....01258 861 413  
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**Wimborne**  
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Walled Garden.....01258 830 295

**DURHAM**

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La Bodega .....01594 844 841  
**Newnham on Severn**  
Camphill Village Trust.....01594 516 344  
**Tetbury**  
Bowdown Farms Ltd .....01666 890 224  
**Thornbury**  
Thornbury Organic Co-op.....01454 415 345  
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Whitfield Farm Organics.....0845 283 0232

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Brockman, AG & Co.....01227 732 001  
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**Gravesend**  
Dabbs Place Organic Farm .....01474 815 393  
**Horsmonden**  
Simply Wild Food Company .....08456 586 141  
**Ightham**  
Church View Farm.....01732 886 680  
**Tunbridge Wells**  
Organic Health Shop, the .....01892 538 155  
**Wingham**  
Wingham Country Market .....01227 720 567

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The Wholefood Depot Ltd.....01282 606 500  
**Lancaster**  
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**Countesthorpe**  
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**Grantham**  
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**SE6**  
Capricorn Organics .....020 8306 2786  
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**Oswestry**  
Doggart, A.....01691 652 166  
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**Lower Claverham**  
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**Taunton**  
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**Stoke-On-Trent**  
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**Eye**  
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Hillside Nurseries.....01473 652 682  
**Newmarket**  
DJ Produce Ltd.....01638 552 709  
**Saxmundham**  
Swallow Organics.....01728 668 201

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Sunshine Organics.....01483 268 014  
**Redhill**  
Greener Greens.....01737 766 792  
**Worplesdon**  
Horti. Halcyon.....01483 232 095

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Willow Nursery.....01243 552 852  
**Brighton**  
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**Chichester**  
Wayside Organics.....01243 779 716  
The Whole Food Shop.....01243 790 901  
**Hartfield**  
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**Mayfield**  
Herons Folly Garden.....01435 873 608  
**Midhurst**  
Down to Earth.....01730 815 133  
**Plumpton**  
Ashurst Organics.....01273 891 219

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Mythe Farm Organic Produce.....01827 712 367  
**Leamington Spa**  
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Market Gardens.....07780 688 271  
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**Swindon**  
Barker, DI & AM.....01793 770 219  
Coleshill Organics.....01793 861 070  
**Warminster**  
Pertwood Partners.....01747 820499  
**Yatesbury**  
Yatesbury Organics.....01672 539 191

### WORCESTERSHIRE

**Pershere**  
Oxton Organics.....01386 860 477

### YORKSHIRE, EAST

**Driffield**  
Green Growers.....01377 255 362  
**Hull**  
Arthur Street Trading Co.....01482 576 374  
Slater Organics.....01964 527 519  
**North Cave**  
HNP Direct.com.....01430 425 531

### YORKSHIRE, NORTH

**Cowthorpe**  
Goosemoorganics.....01423 358 887  
**Kirkbymoorside**  
Farndale Free Range Ltd.....01751 430 323  
**Northallerton**  
Low Leases Organic Farm.....01609 748 177  
Robinson, DS.....01609 772 032  
**Richmond**  
Hazelbrow Organic Farm.....01748 886 224  
Farm-A-Round.....020 7627 8066  
Bluebell Organics.....07759 832 234  
**Tadcaster**  
The Organic Pantry.....01937 531 693  
**Whitby**  
First Season.....01947 601608

Pasture Cottage Organics.....01947 840 075  
**York**  
Yo Aspin Organics.....01439 771 848

### YORKSHIRE, SOUTH

**Sheffield**  
Beans.....0114 2681 662  
Down To Earth.....0114 2685 220

### YORKSHIRE, WEST

**Hebden Bridge**  
Valley Garden Organics.....01422 846 651  
**Huddersfield**  
Half Moon Healthfoods.....01484 456 392  
Natural Choice.....01484 513 162  
**Leeds**  
Love Organic!.....01132 663 030  
**Pontefract**  
Brickyard Organics.....01977 617 327  
**Shipley**  
Bradford Wholefoods.....01422 202 648  
**Wetherby**  
Goosemoor Organic Produce.....01423 358 887

### SCOTLAND

**Aberdeen**  
Lembas.....01569 731746  
**Ardrossan**  
Wildly Organic.....01294 472075  
**Armadale Pier**  
Rubha Phoil Forest Garden.....01471 844700  
**Birkhill**  
Bee-Organic.....01382 581186  
**Cupar**  
Bellfield Organic Nursery.....01337 860764  
**Dumbarton**  
Epo Growers.....01389 875337  
**Edinburgh**  
Grow Wild.....0131 443 7661  
Damhead Organic Foods.....0131 448 2091  
**Glasgow**  
Roots & Fruits Wholefoods  
& Organics.....0141 3393097  
**Glendale**  
Glendale Salads.....01470 511349  
**Inverness**  
Tio Ltd.....01667 462189  
Macleod Organics.....01668 462555  
**Inverurie**  
Croft Organics.....01467 981717  
**Kirriemuir**  
Angus Organics Ltd.....01575 540294  
**Kyle of Lochalsh**  
Raasay Walled Garden.....01378 660345  
**Newmarcher**  
Ward, Colin, J.....01651 862041  
**Pencaitland**  
East Coast Organic Boxes.....01875 340227  
**Stonehaven**  
Fraser, J & M.....01569 730195  
**Tarbolton**  
Stair Organic Growers.....01292 541369  
**Tarskavaig**  
Achnaclaich.....01471 855315  
**Turriff**  
Greenness Organics.....01888 544877

### WALES

**Anglesey**  
Foreman, Helen.....01407 742 293  
**Bangor**  
Dimensions Health Store.....01248 351 562  
**Brecon**  
Beacons Vegi Boxes.....01874 636 785  
The Cilliau.....01874 711 224  
**Builth Wells**  
The Cilliau.....07887 656 887  
**Caerphilly**  
Source, the.....029 2088 3236  
**Cardiff**  
Pulse Wholefoods.....02920 225 873  
Spice of Life.....02920 487 146  
Green Cuisine.....02920 498 721  
**Clunderwen**  
Flynnon Farm.....01437 532 570  
**Deeside**  
Organic Stores.....01244 881 209  
**Haverford West**  
Sarra, Mr & T.....01437 762 323  
**Monmouth**  
Irma Fingal-Rock.....01600 712 372  
Carrob Growers.....01600 714 529  
**Pwllheli**  
Ty'n Lon Uchaf.....01766 810 915  
Llangybi Organics.....01766 819 109  
**Swansea**  
Jade Gate Organic Produce.....01792 232 643

**MEAT**

**WHERE DO YOU GET YOUR MEAT?**



**Might there be a different way of buying meat that works well for you, that could guarantee better quality and give you a cleaner conscience? Could you buy locally, buying direct from the people who actually farm the animals that**

**produce the meat? Or could you use a butcher who can tell you where all his or her meat comes from, and get special things for you when you want them?**

**BOX DELIVERY**

**BERKSHIRE**

**Lambourn**  
Sheepdrove Organic Farm .....01488 71659

**CAMBRIDGESHIRE**

**Ely**  
Naturally Yours.....01353 778 723

**CORNWALL**

**Cusgarne**  
Cusgarne Organics.....01872 865 922

**Penzance**  
Vivian Olds Ltd.....01736 788 520

**Truro**  
Carleys of Cornwall.....01872 277 686

Mewton PG .....01872 540 343

Nuncarrow Organic Farm.....01872 540 343

**Tywardreath**  
Stoneybridge Organics .....01726 813 858

**CUMBRIA**

**Carlisle**  
Whiteholme Farm .....01697 748 058

**Grange-Over-Sands**  
Howbarrow Organic Farm .....01539 536 330

**DERBYSHIRE**

**Ashbourne**  
Nix Organix.....01335 360 996

**DEVON**

**Exeter**  
The Organic Farmers Market.....01392 875 678

**Holsworthy**  
Providence Farm Meats.....01409 254 421

**Kingswear**  
Fountain Violet Farm .....01803 752 363

**Okehampton**  
Fishleigh Estate.....01837 810 124

**Umerleigh**  
Higher Hacknell Meat .....01769 560 909

**DORSET**

**Beaminster**  
Childhay Manor Organics .....01308 868 709

**GLOUCESTERSHIRE**

**Berkeley**  
Adeys Farm Meats .....01453 511 218

**LONDON**

**Ealing**  
Thorogoods of Ealing.....020 8567 0339

**Notting Hill**  
Lidgate.....020 7277 8243

**MIDLANDS, WEST**

**Birmingham**  
Rossiter, S & A.....0121 4581 598

**NORFOLK**

**Norwich**  
Harveys Puremeat.....01603 621 930

**NORTHUMBERLAND**

**Hexham**  
Northumbrian Quality Meats .....01434 270 184

**OXFORDSHIRE**

**Wantage**  
Real Farm Foods Ltd. ....01235 762 461

**SOMERSET**

**Exmoor**  
Brown Cow Organics .....01749 890 298

**Shepton Mallet**  
Hindon Organic Farm .....01643 705 244

**Bath**  
Radford Mill Farm .....01761 479 572

**Taunton**  
Stoneage Organics .....01823 432 488

**SUFFOLK**

**Woodbridge**  
Red Poll Meats.....01728 748 444

**SURREY**

**Shere**  
Drydown Farm .....07941 277 545

**Wintney**  
Organically Speaking .....01483 531 319

**Bramley**  
Wintershall Partnership .....01483 892167

**SUSSEX, WEST**

**Billingshurst**  
Steepwood Farm .....01403 785 434

**WARWICKSHIRE**

**Rugby**  
Browning, GNF & GA.....01926 632 246

**WILTSHIRE**

**Swindon**  
Purton House.....01793 770 219

**YORKSHIRE, EAST**

**Driffield**  
Barmston Organics .....01262 468 128

**SCOTLAND**

**Perth**  
Hugh Grierson.....01738 730201

**WALES**

**Clyro**  
Clyro Hill Farm .....01497 820520

**MAIL ORDER**

Daylesford Organic.....01608 731 700

Graig Farm Organics .....0159 785 1655

Higher Hacknell Farm .....0176 956 0909

Meatshop .....0122 857 7329

Natural Good Food .....01455 556878

Save the Bacon .....0160 469 6859

Sheepdrove Organic Farm .....0148 871 659

Swaddles .....0845 456 1768

The May Highland Beef.....0157 042 3080

The Organic Beef Company .....0148 866 8429

The Real Meat Company.....0198 584 0562

Traditional Norfolk Poultry .....0195 349 8434

Well Hung Meat .....0845 230 3131

**FASHION**

**GENERAL**

And Albert .....01482 863 068

Bishopston Trading Company.....01453 766 355

Chandni Chowk.....01179 300 059

Cloths Works .....01225 309 218

Daily Bread Co-Operative .....01604 621 531

Epona .....01914 151 201

Ethical Wares .....01570 471 155

Ford Barton.....01398 351 139

Ganesha London.....020 7928 3444

Garthenor .....01570 493 347

Gossypium .....01273 488 721

Green Fibres .....0845 330 3440

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Grounded .....020 7503 0279

Hemp Union .....01482 225 328

Hug.....0845 130 1525

Isle of Mull Weavers.....01681 700 265

Marlo Clothing.....01736 753 254

Myriad Organics.....01584 872 665

Natural Collection .....0870 331 3333

Natural Dye Company.....01258 840 549

One World Shop .....01312 294 541

Organic Attire Co.....020 7924 3345

Patagonia .....0033 450 88 44 44

People Tree .....020 7739 0660

Schmidt Natural Clothing.....0845 345 0498

Shared Earth.....01904 632 896

Siesta.....01227 464 614

Spurrier Nature.....0870 725 9885

Spurriergate Centre.....01904 629 393

Texture.....020 7241 0990

Terramar Organics.....07929 371684

Treehouse TLC.....01970 625 116

Traidcraft.....01914 911 001

World of Difference.....01788 579 191

**SHOES**

Birkenstock .....020 7240 2783

Ethical Wares .....01570 471 155

Fairdeal Trading.....0870 766 5796

Green Shoes.....01803 864 997

Vegetarian Shoes.....01273 691 913

**T-SHIRTS**

Equip .....0117 953 9991

FunkyGandhi.com.....07979 993 533

Howies.....01239 614 122

Terramar Organics.....07929 371684

THC.....020 8630 9001

Tonic T-shirts.....07838 250 749

**FUNERALS**

**COFFINS**

Eco Coffins.....01303 850 856

Greenfield Coffins .....01440 788 886

**FUNERALS**

Alternative Funerals .....0800 197 0401

Arka.....01273 746 011

Celtic Casket.....01283 521 104

The Funeral Company Ltd.....01908 225 222

Green Endings .....020 7424 0345

The Natural Death Centre .....0871 288 2098

S. Stibbards & Sons .....01702 558 717

Sawd Partnership.....01795 472 262

Somerset Willow Co.....01278 424 003

Willow Weave.....01953 887 107

**GARDENS**



**ALL PURPOSE**

British Eco .....0191 209 4161

Natural Collection .....0870 331 3333

Organic Gardening

Pinetum .....01452 750 402

The Catalogue .....0845 130 1304

Tamar Organics .....01822 834 887

The Green Shop .....01452 770 629

Pinetum .....01452 750 402

**GARDEN FURNITURE**

Duchy Originals.....020 8831 6800

English Hurdle.....01823 698 418

Pendlewood.....01617 894 441

Re-Form Furniture.....01209 711 581

Wayfarer Products.....01924 492 300

**NURSERIES AND GARDENS**

Butterworths' Organic

Fruit Nursery .....01290 551 088

Ryton Organic Gardens.....02476 303 517

Walcot Organic Nursery .....01386 553 697

**PEST CONTROL**

Agralan.....01285 860 015

Defenders Ltd .....01233 813 121

Scarletts Plant Care.....01206 240 466

**POTS AND SUPPORTS**

Panda Stix.....01623 648 200

Stakepots .....01246 261 798

**SEEDS**

Association Kokopelli Organic

Seeds.....01227 731 815

**WATER TREATMENT**

Green Ways .....01962 761 600

Pinetum .....01452 750 402

Raindrain Lt .....01924 468 564

## DIRECTORY GREEN PAGES

### HEALTH & BEAUTY



**You can absorb up to two kilos of chemicals through toiletries and cosmetics each year. So throw away all your toxic beauty products and choose these ones that are kind to your body as well as the environment**

#### COSMETICS & BEAUTY TREATMENTS

Avea .....	870 1999 219
Aveda .....	8000 747712
Barefoot Botanicals.....	0870 220 2273
Beauty Without Cruelty .....	01229 775185
Beauty Naturals .....	0800 980 6662
Dr. Hauschka Natural Skin Care .....	01386 792 622
Earthbound Organics .....	01597 851157
John Masters Organics.....	01874 730 979
Lavera .....	01557 870 203
Mybeingwell.com.....	01326 377555
Organica J.....	01330 850257
Primavera Aromatherapy.....	01373 812640
Suvarna Pure and Natural Cosmetics.....	01695 728286

#### DEODORANT

Anne Elise Natural Skincare.....	01304 374 594
Body Organics.....	0870 870 8586
Dr. Hauschka Natural Skin Care .....	01386 792 622
PitRok Ltd .....	0208 5631120
Weleda .....	0115 9448200

#### MENSTRUAL PRODUCTS

Natracare.....	01275 371 764
Menses .....	0117 9851646
The Mooncup.....	01273 673845

#### SOAPS

Caurnie Soaperie .....	0141 776 1218
Hejhog .....	0845 606 6487
Simply Soaps.....	01603 720 869
The Soap Kitchen.....	01805 622944



Woodspirits.....0208 2934949

#### SUN PROTECTION

Aubrey Organics.....	1-800-282-7394
Dr. Hauschka Natural Skin Care .....	01386 792 622
Ecolani .....	1-800-625-5240
Neal's Yard.....	020 7498 1686
Yaoh .....	0117 9239053

#### TOILETRIES

Akamuti.....	0845 4589242
Ascent.....	01497 847788
Beauty Naturals .....	0800 980 6662
Body Organics.....	0870 870 8586
Bio-D Company Ltd.....	01482 229950
Caurnie Soaperie .....	0141 776 1218
Cioccolatina .....	01189473178
Comfort and Joy .....	01367 850278
Creightons Naturally Plc.....	01903 745611
Dolma .....	0115 9634237
Dr. Hauschka Natural Skin Care .....	01386 792 622
Essentially Yours.....	01372 465 414
Earthbound Organics .....	01597 851157
Faith in Nature.....	0161 7642555
Farrow and Humphreys Ltd.....	01780 482400
Greenfibres .....	0845 330 3440
Green People .....	01444 4011444
Hemp Garden .....	01288 355572
Honesty Cosmetics.....	01629 814 888
John Masters Organics.....	01874 730 979
Lavera .....	01557 870 203
Mariposa Alternative Bodycare.....	01273 242925
Mother Earth .....	01229 885266
Mybeingwell.com.....	01326 377555
Naturisimo.com.....	020 75847815
Neal's Yard.....	020 7498 1686
Nirvana Natural.....	01494 880885
Organic Blue .....	020 84248844
Organic Botanicals.....	01273 773182
The Organic Health Shop .....	01892 538155
Potions and Possibilities .....	01394 386161
Primavera Aromatherapy.....	01373 812640
Pure Nuff Stuff.....	01736 366008
Pure Potions.....	01273 555 123
Right 2 Know.....	01280 822 050
Simply Nature .....	01580 201687
SoOrganic.com.....	0800 1692579
Spiezia Organics Ltd.....	0870 8508851
There Must be a Better Way.....	0118 9479352
The Organic Pharmacy .....	020 73512232
Think Natural .....	0845 6011948
Twinkle Twinkle.....	01118 934 2120

#### TOOTHPASTE

Green People .....	01444 4011444
Kingfisher Toothpaste.....	01603 630484

### HOLIDAYS

**The following holidays have all been recommended to us by friends and family. We hope you enjoy them as much as they did, and if you know of any other places that Ecologist readers might enjoy please email [editorial@theecologist.org](mailto:editorial@theecologist.org)**

#### SHARPHAM FAMILY CAMP

Saturday 30 July to Sunday 7 August 2005. A family holiday in beautiful Devon countryside. Price: adults £130, Children and teens £60, under-3s free  
**Tel: 01803 732 324**  
**[www.sharphamfamilycamp.co.uk](http://www.sharphamfamilycamp.co.uk)**

#### DEVON, THE MAGIC COTTAGE

Enjoy quality time in cliff-top hamlet, where time stands still. Scrumptious breakfast, home-made bread and garden-grown herb teas. Delightful rooms. B&B from £25 each.  
**Brochure 01395 512238**

#### MID WALES STREAMSIDE CARAVAN

Sleeps 4+. Conservation smallholding; wildlife pond, swimming, beautiful walks. Near Machynlleth and Centre for Alternative Technology. £120 - £140pw. No smoking. Also CAMPING.  
**[lizatome@fish.co.uk](mailto:lizatome@fish.co.uk)**  
**Tel: 01654 702718**

#### THE ECOLOGE

A simpler way to relax! A wonderful break from the real world. Freedom for children. Magic moments. Great Hospitality. Somewhere precious.  
**[www.internationalbusinessschool.net/eco-lodge](http://www.internationalbusinessschool.net/eco-lodge).**  
**[gclarke@internationalbusinessschool.net](mailto:gclarke@internationalbusinessschool.net)** Tel:01205 870062/870396

#### HOUSEBOAT IN DEVON

Traditional wide-beam barge sleeping five in two en-suite cabins. Moored on private lake and wetland. Exclusive trout fishing. Local walking, sailing, off-road cycling.  
£330 - £695pw.  
**[www.blagdonwater.com](http://www.blagdonwater.com)**  
**Tel: 01566 - 779830**

#### YURT & CAMPING HOLIDAYS ON CORNISH ORGANIC FARM

Holidays on our farm on Bodmin Moor will leave you feeling relaxed, refreshed, and at peace with nature  
**01208 850491**  
**[www.southpenquite.co.uk](http://www.southpenquite.co.uk)**

#### WITH THE MOUNTAINS OF MOURNE

Above and organic vegetable fields below: two self catering wings of a newly built farmhouse, sleeping four each, both apartments boast huge conservatories...and spiral staircases. Glimpse the sea. Nr Newcastle, Co Down.  
**02843 770241 [www.burrenwood.com](http://www.burrenwood.com)**



**HOME**

**From ingenious, easy-to-fit water-saving devices, to reclaimed building materials: everything you'll need to renovate and clean your home without harming the environment is in these listings**

**ENERGY**

**ELECTRICITY: suppliers**  
 Ecotricity .....08000 326 100  
 Good Energy.....0845 456 1640  
 Green Energy.....0845 456 9550

**Generation**  
 Dulas Ltd.....01654 705 000  
 Green Dragon Energy.....01654 761 731  
 Rainbow Solar Trading.....01983 533 129  
 Sustainable Energy Installations.....01256 392 704  
 Wind and Sun Ltd.....01568 760 671

**EFFICIENCY: Energy saving**  
 Eco-Exmoor Ltd.....01598 763 595  
 Energy and Environment.....0161 881 1383  
 ESI.....01481 722 299  
 Lumin8.....01233 666 000  
 The Organic Energy Company.....0845 458 4076

**Light bulbs**  
 Lampholder 2000.....01536 520 101  
 Lumin8.....01233 666 000

**Insulation**  
 Construction Resources.....020 7450 2211  
 Ecomerchant.....01795 530 130  
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Products Ltd.....01484 854 898  
 Green Building Store.....01484 854 898  
 The Green Shop.....01452 770 629  
 Green systems.....01763 260 719  
 Heraklith UK Ltd.....01628 784 330  
 Klobber Ltd.....01934 853 224  
 Polanwall Ltd.....01392 841 777  
 Second Nature.....01768 486 285  
 Thermafleece.....01768 486 285

**HEATING**

**Ground Source**  
 Dando Geothermal.....01903 731 312  
 Earthwise Scotland Ltd.....01330 833 915  
 Eco Heat Pumps.....01142 962 227  
 Geoscience Ltd.....01326 211 070

Geothermal Heating International.....02476 673 131  
 Green Systems.....01763 260719  
 Groenholland UK Ltd.....07905 508 726  
 Ground Source Solutions Ltd.....01246 822 808  
 Ice Energy.....01865 882 202  
 Kensa Engineering Ltd.....01326 377 627

**Solar Thermal**  
 Future Heating Ltd.....020 8351 9360  
 Green Shop Solar.....01452 770 629  
 Green Systems.....01763 260719  
 HiTech Energy Ltd.....0845 601 3540  
 The Organic Energy Company.....0845 458 4076  
 Power Tech Solar.....08707 300 111  
 Radiant Energy.....01522 525 300  
 The Solar Design Company.....0151 606 0207  
 Solarsense UK Ltd.....01275 394 139  
 Solar Twin.....0845 130 0137  
 Sun Harvester.....01786 822 827  
 West Wales Solar Heating.....01994 419 439

**Wood Fuel & Stoves**  
 3G energi.....01573 229 198  
 Able Fuels Ltd.....01484 515 578  
 Beacon Stoves.....01559 371 058  
 Bio Energy Devices.....01446 781 415  
 Bioenergy Technology Ltd.....01825 890 140  
 Chillii Penguin Stoves.....02920 865 536  
 Construction Resources.....020 7450 2211  
 ebc wood fuels.....01953 455 854  
 Green Systems.....01763 260719  
 Rural Energy Ltd.....01664 454 989  
 Wood Energy Ltd.....01398 351 349

**PROFESSIONAL SERVICES**

**Architects**  
 Chris Morton, Herefordshire.....01684 541 480  
 Finch Macintosh Architects,  
 Winchester.....01962 855 240  
 Goddard Wybor practice,  
 West Yorkshire.....01132 666 044  
 Jon Allen, London.....020 8961 3279  
 Neill Lewis, Worcestershire.....01684 563 356

Nicholas Hare.....0207 607 4433  
 Quattro Design, Bristol.....01179 299 672  
 Quentin Alder, Bristol.....01179 683 111

**Building consultants**  
 Cob in Cornwall.....01326 231 773  
 Concept Timber.....01225 792 949  
 Mike Wye and Associates.....01409 281 644

**Building contractors**  
 Ecorenovations.....0161 442 0666

**Carpenters**  
 J.G.Horning, Devon.....01803 732 135  
 Richard Arnold, Devon.....01884 350 51  
 Tom Straker, Herefordshire.....01432 853 113

**Energy consultant**  
 Encraft.....08456 022 874

**Roofing specialist**  
 Rawnsley Woodland Projects.....01208 813 490

**WATER**

**Conservation**  
 Celtic Water Management.....01239 811 465  
 Conservation Engineering Ltd.....01359 269 360  
 Construction Resources.....020 7450 2211  
 Eco Logic.....01217 663 016  
 Flow Control Water  
 Conservation Ltd.....08707 558 811  
 Flowco Mariflo Ltd.....020 8330 2487  
 Green Building Store.....01484 854 898  
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 Hippo the Water Saver.....01989 766 667

**Filters**  
 Aqua Vitae.....01404 841 841  
 Aquasaver Ltd.....01288 354 425  
 Capital Water Treatment.....020 8649 9503  
 Earthly Goods.....01480 812 004  
 Eden.....0800 917 0977  
 Green-way services.....01202 874 413  
 Pure H2O.....08080 820 820  
 Simply Water.....00353 149 20414  
 Tap Magic.....01473 252 043  
 The Healthy House.....01453 752216

**Rainwater harvesting**  
 Construction Resources.....020 7450 2211  
 Envireau Rainwater Management.....01296 633 000  
 Free Rain.....01636 894905  
 Rainharvesting Systems.....01452 772 000

**HOME RENOVATIONS**

**Flooring**  
 Ashcroft Reclaimed  
 Timber Flooring.....01243 554 769  
 Construction Resources.....020 7450 2211  
 Drummonds Architectural  
 Antiques.....01428 609 444  
 Forbo-Nairn Ltd.....01592 643 777  
 Rawnsley Woodland Products.....01208 813 490  
 Reclaimed.....020 8558 2811  
 Treesave Reclamation Ltd.....01787 227 272  
 Treework Flooring.....01275 464 466  
 Yorkshire Reclaimed Flooring.....01937 843 532

**Paints & paint remover**  
 Auro Organic Paints.....01452 772 020  
 Construction Resources.....020 7450 2211  
 Earth & Reed Ltd.....01449 722 255  
 Earth Born Paints.....01928 734 171  
 Eco Solutions Ltd.....01934 844 484  
 Green Building Store.....01484 854 898  
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 LILLI.....01296 714 184  
 Little Green Paint Company.....0161 230 0880  
 Lizzy Induni Traditional Paints.....01929 423 776  
 Nutshell Natural Paints.....0136 473 801

The Green Shop.....01452 770 629

**Recycled materials (incl. salvage)**  
 Smile Plastics.....01743 850 267  
 Source4U.....01926 498 444  
 Toby's Reclamation.....01392 833 499  
 Viking Reclamations.....01302 835 449

**Self-build homes**  
 Association for Environment  
 Conscious Building.....01559 370 908  
 Association of Self Builders.....07041 544 126  
 Ecological Design Association.....01453 765 575  
 Insideout Buildings.....01524 737 999

**Tiles**  
 Natural Tile.....01285 642 300  
 Siesta Cork Tile Co.....020 8683 4055

**Timber**  
 Altham Hardwood Centre.....01282 771 618  
 Ecomerchant.....01795 530 130  
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 Rawnsley Woodland Products.....01208 813 490  
 Reclaimed Pine Online.....01202 789 868  
 Reclaimed Timber Specialists.....020 8558 2811  
 Victorian Wood Works.....020 8534 1000

**Windows and doors**  
 Ecomerchant.....01795 530 130  
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 Environmental Construction  
 Products Ltd.....01484 854 898  
 Merewood Joinery.....01614 800 363  
 Preston Door & Pine Stripping.....01772 725 943

**BEDDING AND LINENS**

Green Fibres.....0845 330 3440  
 Schmidt Natural Clothing.....0845 3450 498  
 Texture.....020 7241 0990  
 Willey Winkle.....01432 268 018

**CLEANING**

21st Century Health.....0800 0260 220  
 Aqua Ball.....0800 026 0220  
 Bio-D Company Ltd.....01482 229 590  
 Down to Earth.....01793 732 000  
 Ecotopia.....01453 752 345  
 Ecover.....01635 574 553  
 Green Fibres.....01803 868001  
 Greenlands.....01892 871 285  
 The Healthy House.....01453 752 216  
 Natural Eco Trading Ltd.....01892 616 871  
 Vertue.....020 8806 7294  
 Wonderwash Laundry Ball.....0161 832 7788

**FURNITURE & FURNISHINGS**

**New**  
 Arbor Vetum.....01386 840 438  
 Golden Lamb Rugs.....01600 740 252  
 Grand Illusions.....01747 854 092  
 Lombok.....020 7736 0001  
 Rawnsley Woodland Products.....01208 813 490  
 Senior & Carmichael.....01737 844 316  
 thingbuilder.....07779 623 964  
 Treske Ltd.....01845 522 770

**Recycled & Salvage**  
 African Trackwoods.....01488 686 850  
 Architectural Salvage Centre.....020 8459 2947  
 Art-eco.....07792 702 735  
 D & A Binders.....020 7609 6300  
 Living Concepts.....020 8378 1009  
 Reclaimed Pine Online.....01202 789 868  
 Reel Furniture.....01603 629 396  
 thingbuilder.....07779 623 964



**STORECUPBOARD**

**Too busy to make it to the shops? Then let them come to you. As well as the fruit and vegetable box schemes listed on page 91, there is a wealth of companies who deliver all your weekly needs right to your door.**

**NATIONWIDE**

Barleywood Walled Garden.....01177 935 1725  
 Community Foods.....020 8450 9411  
 Duchy Originals.....020 8831 6800  
 Eostre Organics Ltd.....0195 378 9639  
 Equal Exchange.....0131 220 3484  
 Essential Trading Cooperative.....01177 958 3550  
 Everybody Organic.....0170 765 1243  
 Goodness Direct.....0871 871 6611  
 Graig Farm Organics.....0159 785 1655  
 Infinity Foods Cooperative Food.....0127 342 4060

Mother Hemp.....0126 242 1100  
 Natural Good Foods.....01455 556878  
 Oil in the Raw.....0157 935 1178  
 Organico (see back cover ad).....0118 951 0158  
 Suma.....0845 458 2290  
 The Organic Delivery Company.....020 7739 8181  
 Traidcraft.....0870 443 1018  
 Westcountry Organics.....0164 724 724  
 Wild Oats.....0117 973 1967

## DIRECTORY GREEN PAGES

### OFFICE RESOURCES



#### ELECTRICITY

Ecotricity .....0800 0326 100  
 Good Energy .....01249 766 090  
 Green Energy .....08454 569 550

#### GRAPHIC DESIGN

Alternotion .....01285 888 672  
 Ecographic .....01273 201 361  
 Sussed Design .....01273 275 302  
 Zodshop .....01239 711 638

#### INK CARTRIDGES

Action Aid Recycling .....08453 100 200  
 The Green Stationary Company .01225 480 556  
 Office Green .....020 8592 9998

#### JANITORIAL

Environment Saving Supplies .....024 7638 6544  
 Greenlands Environmental Care 01892 871 285  
 Vertue .....020 8806 7294

#### PR

Substance PR .....0238 023 5050

#### PROMOTIONAL MATERIALS

Remarkable! .....020 8741 1234  
 Save a Cup .....01494 510 167  
 Yo-Yo Promotions .....01252 620 593

#### RECYCLED OFFICE SUPPLIES

Dartex Office Supplies .....01322 521 545  
 The Green Stationary Company 01225 480 556  
 Paperback .....020 8980 2233  
 Recycle It .....08707 743 762

#### STATIONERY

Ecotopia .....01453 752 345  
 The Green Stationary Company 01225 480 556  
 Remarkable! .....020 8741 1234

#### TELEPHONE & INTERNET

Alternotion .....01285 888 672  
 Green ISP .....0845 058 0659  
 GreenNet .....08450 554 011  
 The Phone Co-op .....08454 589 000

#### WATER COOLERS

Aquaid .....01223 830 400  
 Simply Water .....01514 755 589

### PERSONALS

Want to meet people, or just a special person with a passion for global issues? Visit <http://www.ethicalcentral.com/personals/> today, and make a difference to your tomorrow!

### PERSONAL FINANCE

**Do you want your hard-earned cash to finance wars, vivisection, or child labour? Or do you want it to support environmentally sound products and businesses? If the latter, call the organisations listed below**

#### BANKING

Co-Operative Bank .....08457 212 212  
 Ecology Building Society .....0845 674 5566  
 Triodos Bank .....0117 973 9339

#### FINANCIAL SERVICES

Ethical Investment Co-operative 0845 458 3127  
 Gaeia .....0161 434 4681  
 Naturesave .....01803 864 390  
 Rathbone Greenbank  
 Investments .....0117 930 3000

Social Venture Network .....07958 772 864

#### INSURANCE

Absolute Mortgages .....01865 865 342  
 C I S Insurance .....0161 829 4084  
 Ecology Building Society .....01535 650 777

#### MORTGAGES

Absolute Mortgages .....01865 865 342  
 CD Project .....0795 877 2864  
 Ethical Investment Co-operative 0845 458 3127

### PERSONAL TRANSPORT



**71 per cent of road trips by car are less than five miles long, and 46 per cent are less than two miles long. So why not leave the car keys on the kitchen table and make better use of your local transport network?**

#### BICYCLE

##### ORGANISATIONS

London Cycling Campaign .....020 7928 7220  
 Sustrans .....0117 929 0888  
 UK National Cyclists Organisation 0870 873 006

#### BUS

Travel Line .....08706 082 608

#### CAR

##### Bio-diesel fuel

Ebony Solutions .....01606 301 222

##### Breakdown

Environmental Transport Association .....0800 212 810

##### Electric cars

Electric Car Association .....01823 480 196

##### Electric scooters

Powabyke .....01225 443 737

Electric Scooters .....01206 233 180

##### Fuel-saving devices

Eco Tek .....01844 212 939  
 Power Plus .....01323 417 700

##### Recycling used motor oil

Oil Bank .....0800 663 366

##### Recycled tyres

Environmental Tyre Disposal .....020 8345 6115  
 Tyre Collection Services .....0121 544 1408  
 REG Tyre and Automotive Recycling .....01895 444 714

##### Sharing

Lift Share .....0870 11 11 99  
 Car Clubs .....01132 349 299

#### TRAIN

##### TIMETABLE INFORMATION

National Rail Enquiries .....0845 748 49 50

**RECYCLING SERVICES**

**More than 60 per cent of your rubbish can be recycled. Most of it currently ends up in landfill sites or disappearing up incinerator chimneys. Don't bin it, recycle it**

**ALL PURPOSE**

Forest Recycling Project Ltd.....020 8539 3856  
 Loop .....0800 542 1400  
 Paper Round .....020 7620 3131  
 RECOUP.....01733 390 021  
 Waste Watch.....0870 243 0136

**ALUMINIUM**

Alcan Aluminum Can Recycling...0800 262 465  
 Alufoil .....020 8583 5060  
 Aluminium Packaging  
 Recycling Organisation.....01216 334 656  
 Alupro.....01506 444 644  
 Cash for Cans .....0845 722 722

**BATTERIES**

Centre for Alternative  
 Technology.....01654 705 950

**BICYCLES**

Re-cycle .....0845 458 0854  
 Salvo.....020 8400 6222

**CARPETS**

Carpet Burns.....0133 259 4044

**CARTONS**

Cutouts.....01484 645 281  
 Tetrapak.....0870 442 6000

**CDS**

Beacon Press .....01825 768 611

**CLOTHING**

Quilter Guild .....01422 347 669  
 Oxfam.....01865 312 610  
 Red Cross .....020 7235 5454

**CURTAINS**

The Curtain Exchange .....020 7731 8316

**COINS**

Oxfam.....0870 333 2700  
 RNIB .....0845 766 9999

**COMPUTERS**

DonateaPC.....info@donateapc.org.uk  
 Recycle It .....0870 774 3762  
 Free Computers for Education...01932 874 066

**ELECTRONIC AND HAZARDOUS WASTE**

Strategic Waste  
 Management Services.....0113 243 8777

**FURNITURE**

Furniture Recycling Network .....01924 375 252  
 Homestore E. London.....020 8519 6264

**INK AND TONER CARTRIDGES**

Office Green .....020 8592 9998  
 UK Cartridge Recycling  
 Association .....01706 525 050

**MOBILE PHONES**

Fonebak.....01708 683 400

**OIL**

Actionsmart .....01656 648 899  
 Oil Recycling Association.....01279 814 035

**PAINT**

Community repaint .....020 8362 0752

**PAPER**

British Recovered Paper  
 Association .....01793 889 600

**PLASTIC CUPS**

Remarkable.....020 8741 1234  
 Save-a-cup.....01494 510 167

**REFRIDGERATORS**

Fridge Recycling .....01925 715 400

**SPECS AND SUNGLASSES**

Vision Aid Overseas .....01293 535 016

**TELEPHONE DIRECTORIES**

Yellgroup.....0800 555 444

**TV MONITORS/ MERCURY LIGHT BULBS**

Lamp recycling.....01752 662 050  
 Mercury Recycling.....0161 877 0977  
 Wisar .....01480 462 232

**VOLUNTEERING**



**Increasingly, volunteers are holding the fabric of the world together. Whether it's social cement that's needed or physical labouring, many of today's communities couldn't survive without thousands of hours of donated time. Are you doing your bit?**

**RESOURCES**

Action Without Borders .....001 212 843 3973  
 Environmentjob.co.uk.....0161 2820 920  
 Volunteering England.....0845 305 6979

**UK**

BTCV .....01302 572 244  
 Environ .....0116 2220 222  
 Ethical Consumer .....0161 226 2929  
 Groundwork .....0121 236 8565  
 Time Bank.....020 7401 5420

**INTERNATIONAL**

**MAY ALSO OFFER UK PROJECTS**

Africa and Asia Venture.....01380 729 009  
 African Conservation Experience0870 2415 816  
 Bio Sphere Expeditions .....01502 583 085  
 Coral Cay .....0870 750 0668  
 Cross-Cultural Solutions.....001 914 632 0022  
 Earthwatch Institute .....01865 318 838  
 Friends of the Earth.....020 7490 0881  
 Outreach International .....01458 274 957  
 Project Trust .....01879 230 444  
 Quest Overseas .....020 8673 3313  
 Student Partnership Worldwide ..020 7222 0138  
 Trekforce .....020 7828 2275  
 VSO (Volunteering Advice Line)..020 8780 7500  
 WWOOF .....01273 476 286

**ORGANIC MARKET GARDEN**

in Cheshire offers opportunity to learn. Free accommodation for part-time or full-time, plus some money. Vegetarian and non-smokers only. Free Yoga lessons.

**Tel: 01948 860213 after 9.30pm**

**HELP RESTORE THE CALEDONIAN FOREST**

on a Trees for Life volunteer work week in the beautiful Scottish Glens this spring and autumn.

**More information from:  
[www.treesforlife.org.uk](http://www.treesforlife.org.uk)  
 Tel: 0845 458 3505**

**CAN YOU DESIGN A WEBSITE FOR A NETWORK OF COMMUNITY HERBAL PHARMACIES IN DEVELOPING COUNTRIES?**

Interest in biodiversity, traditional knowledge and social enterprise; Spanish speaker all helpful. UK base Oxford.

**Contact Ruth West  
 Tel 01865 245081  
 Email [ruthwest@gn.apc.org](mailto:ruthwest@gn.apc.org)**



**For professional help with your advertising phone our advertising manager on 0207 3513578**



AND FINALLY...

# WHAT WAS THE LIFE THAT WE WERE LIVING?

We interrupt our regular programming for a moral advisory...



No, the reverend is not too depressed to complete his sermon. I wish to thank all of you in the congregation for your patience with me. I have in the last month fallen down into the dank flesh of my own pulpit, into the steaming darkness below. Oh, to stand in the light again, to look out across the tens of thousands of *Ecologist* faithful. Oh, we are a megachurch by God! Change-a-lujah!

In our last sermon, I suggested to you Brits that parades, petitions, embarrassing newspaper stories about the Downing Street memo, etc, don't work anymore. I went on to counsel you that to save the earth you must show a willingness to offer the ultimate sacrifice, yes, to meet the Christ cowboy devils on their own terms: fight them to the death, Alamo-style. But the editors of *The Ecologist* have pointed out to me that you have been mad dogs in the noonday sun (which never sets) for centuries now. So, this Sunday, I have a much more difficult request, children. For the sake of the world, forego the Stiff Upper Lip.

Stiff Upper Lip was the lead story here in the States when the bombs blew in London. The TV said: 'And today, the day after the tragedy, the English are going to work! Look!' (Images here of taciturn workdays with briefcases.) 'We see here the courage of everyday life! The pursuit of normalcy! Facing down the terror! Why – it's the famous Stiff Upper Lip.'

Bush and Blair and their commercial press – oh how they pushed the 'normal' portrait at the same time that they constructed a second rhetorical front for the opposite of normal, the abnormal, the 'terrorists'. Now, as some of you may

know, the Church of Stop Shopping is located in New York. I watched the second airplane land on that normal day in the south tower of the World Trade Center. On 9/11, too, that old life we were *living* became our much-missed Utopia. B and B intoned then, with violins pumping, 'Let's get back to that old life.' They haven't noticed that we are watching them warily as they explain that we'll kill our way back to our old beloved life. Although, when did a silent audience ever stop Tony Blair? He has become the international poster child for the Stiff Upper Lip.

The truth, once again, is hidden in plain sight. What would be 'normal' really? What would normal be if you and I sat down and talked it through? Well, we might take the most normal structural unit of society, the corporation, which most of us get on the bus and duck into the Tube to travel to on a normal morning; and we might consider how a corporation is only considered healthy if it is officially exploding, expanding every quarter regardless of the consequences. This 'growth' is studied, reported in breathy tones, and the smiling hard-right Christians in suits who ride this cancer are our public leaders... But wait, should our species praise this cancer? No, let's say 'not normal'.

But how do we work our way out of the rhetorical riddle that these consumer politicians present to us? They have avalanched us with their idea of normal and want us to go back to our commuting

and consuming. What do we do? No – DON'T START ANOTHER DAMN MARCH! It won't work to shout, 'No, we're more normal than you!' They just call us terrorists if we shout too loud. We can't face them and argue in rigged contexts, in which B and B and their marketing advisers anticipate our every move. We may have to DO SOMETHING RADICAL – and that calls for a complete dissolution of the upper lip: let's ASSUME OUR GUILT. Yes, imagine that we ourselves

placed the bombs in the buses, and that the buses were packed with Iraqi innocents, going about their normal day. Because that is what we do, children. We put on that fatal bus human beings and animals and plants and anything alive: we make the earth take that ride.

But guilt is not the issue here, change is.

We are bombers. Most of our bombs are delivered by stealth technology, cloaked in normalcy. The radioactivity laces the wind; the six-pack plastic rises into the air twisting with the diving birds; the petroleum products stain the algae under the poles. Our bombs are covered over with normal life, and breaking through that sustained lie of normalcy – that would be coming back to life.

Commuting to *that* job, when our work would be to stop our own bombs – that is the Utopian life that we seek. That is heaven. And so let's do the normal thing and save our own souls.

Amen.

This Sunday I have a difficult request, children: for the sake of the world, forego the Stiff Upper Lip

PHOTOGRAPH BY FRED ASKEW

# You know climate change is happening ...but what can you do to help?



## What is ecotricity?

See [encarta.msn.com](http://encarta.msn.com).

e-co-tric-i-ty

noun

ecofriendly electricity: electric energy produced by ecologically friendly means, for example, by solar power or wind power (informal)  
[Late 20th century. A blend of ecological and electricity.]

The biggest difference you can make is to change where your electricity comes from.

## But choose carefully.

At ecotricity, we spend more per customer on building new sources of renewable energy than every other green supplier put together.\*

We're the only supplier that takes all the money you spend on electricity and invests it in building new sources of green energy. That's why we're the only supplier used and recommended by both WWF and the Soil Association.

## How do you switch?

It's easy. We do all the hard work for you. You can switch your home straight away by calling 08000 326 100 or visiting our website at [www.ecotricity.com](http://www.ecotricity.com)

## ...and it won't cost a penny more!

We promise to match the price of conventional electricity in each region of the UK.

\* In 2004, ecotricity spent over £900 per customer building new sources of green energy. Our nearest competitor spent less than £9.

For more information please see [www.whichgreen.com](http://www.whichgreen.com)

# ecotricity

Call us free on 08000 326 100

[www.ecotricity.com](http://www.ecotricity.com)



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at the Organic Food Festival, Bristol  
on Saturday 3rd and Sunday 4th September

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for sampling, buying and question-asking.  
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