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...AND THE ONE MAN STANDING BETWEEN US AND PILLS THAT DON'T WORK

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and the town that survived

MEET DOUG TOMPKINS
A fashion tycoon who's saving Chile



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Between 1962 and 1971, the US sprayed more than 85 million litres of defoliants, containing almost 375 pounds of dioxin – the most dangerous chemical known to man – over vast areas of Vietnam. Despite more than 150,000 cases of varying birth deformities, and upwards of three million other major health maladies directly attributed to this mass poisoning – the US continues to refuse to pay compensation.

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WAL★MART

THE HIGH COST OF LOW PRICE

Director: Robert Greenwald, **General release:** May 12 2006, **95 mins**

Greenwald's documentary brilliantly exposes the complete disregard Wal-Mart has for its workers, its wholesale destruction of local retail outlets and insidious corruption of communities surrounding its stores. Through personal accounts, he reveals the unfair competition the multinational

poses for small business, its fear-imposed ban against employees joining a union, its discriminatory treatment of staff and its supervisors who tamper with timesheets in order to save money.

CUT PRICE WAGES IN THE US

Despite an annual turnover of \$254 billion, the average yearly wage of a US Wal-Mart employee fails to reach above the US poverty line. The federal poverty level for an American family of four is \$17,650 per annum, while the average Wal-Mart employee's wage is \$13,861. Meanwhile, Wal-Mart's chief executive officer Lee Scott earned himself \$27,207,799 in 2005 alone.

UNION DESTROYERS

Wal-Mart has spent \$100,000 on a 24-hour anti-union hotline, \$30,000 on an undercover spy van per store and a staggering \$7,000,000 for a rapid response team with corporate jet to quash any sign of potential union activity.

SWEATSHOP EXPLOITATION

Around 189,000 Bangladeshi workers are also denied basic rights. Employed to sew clothing, they work 14-hour days, seven days a week. Greenwald visits employees in Shenzhen, China, who live in specially constructed Wal-Mart dorms, for which they pay rent and utility bills out of their \$3-per-day wage. To put this in perspective, it costs Wal-Mart \$0.18 to assemble a toy car. \$14.96 is the retail price of the toy car.

SO WHO DOES BENEFIT FROM WAL-MART?

First, the Walton family, five of whom are currently worth \$102 billion. Secondly the Republican Party. In 2004 the Walton family gave \$6,000 to the company's Critical Need Fund for employees in financial difficulty. In the same year the family donated \$3.2 million to political campaigns, 85 per cent of which went to the Republican Party.



ecologist

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EDITORIAL

If you really want to shame a campaigner nowadays, you call him a NIMBY. But I've never understood why. NIMBYs are simply people who care about their local environment and who are willing to protect it. That's what the term means. It's hard to imagine a more natural or positive characteristic. And the good news, according to *The Times*, is that 84% of people take a NIMBY view of new developments in their neighbourhoods.



It's not difficult to understand why the government and the big developers who enjoy privileged access to government resent NIMBYism, and why they've sought to make it into something sinister and disagreeable. When the Housebuilders Federation warns that "NIMBYism is rampant and well funded," we know exactly where they're coming from. Nor is it surprising that governments forever seek ways to overcome NIMBYism – invariably by moving the decision making process as far away as possible from the people likely to be affected by those decisions.

What's harder to understand is why so many otherwise sensible people – campaigners, environmentalists, conservationists and so on – have allowed these self-evidently biased organisations to succeed in turning NIMBYism into a bad word. Why, whenever a local group criticises a local development, does it feel the need to begin with the disclaimer "I'm not a NIMBY, but...?"

Of course they are. And that's a good thing. Almost every river campaign, indeed most good environmental initiatives happen because people want to protect the environment they know and love. It's not surprising that decisions affecting a local environment are best taken by those living in that environment. So why should people be embarrassed about wanting to protect their own backyards?

The most compelling argument relates to housebuilding. According to the developers and some academics, unless we allow more houses to be built on greenfield sites, house prices will continue to rise, and growing numbers of young people will be excluded from any possibility of owning their own home. It is a view endorsed by the Deputy Prime Minister. As a result, Britain faces the prospect of seeing roughly 20,000 acres of greenfield countryside covered in concrete over the next five years – the equivalent of a new city the size of Manchester. And that doesn't include the 170,000 new homes already being built every year.

To prevent this from happening – so the argument goes – is to contribute directly to social exclusion. But it's not true. Realistically, how many homes would we have to build in the South East before freshly qualified teachers could afford to buy their own home? Even the Office of the Deputy PM doesn't believe the planned house building splurge will curtail the rise in house prices by more than a fraction of a percent.

So it's a heavy price to pay for a solution that is both short term and insignificant – and which will in any case contribute to all kinds of other problems, not least water shortages and an accelerated brain drain from the North of England. It's still heavier when the alternatives are considered. For instance, there are at least 720,000 vacant homes in Britain, the vast majority of which are in the desirable South. Surely it's worth making the effort to free these homes onto the market before saturating our already crowded countryside with newbuild. And even failing that, there are 75,000 acres of brownfield sites that are both available and suitable for up to 1.5 million new homes.

George Orwell understood that control of a debate requires ownership of the language. We shouldn't be embarrassed to call ourselves NIMBYs. On the contrary, if we are not motivated at least partially by a desire to improve our local environment, that is far more shameful. After all – if we're not willing to stand up for our own backyards – who will?

Letters



NO EXCUSES! JUST BREASTFEED

Thank you for uncovering the true horror of breastfeeding statistics in this country, 'Suck on This' *Ecologist* April 2006. With a health system that provides formula milk to low income mothers, there is no evidence that the authorities appreciate the significant health benefits of breastfeeding. From before conception women should expect and be expected to fulfil their commitment to bearing children by keeping their babies at the breast for at least one year, preferably three. I have no sympathy for those who claim to be too tired, have bad milk, babies are too hungry, find feeding too painful or dislike the closeness that correct feeding brings. These women are lazy and want for nothing more than an opt-out clause of duty, responsibility and care for their children.

Sadly, I feel that this is a sign of the total lack of respect in our society for the role and art of the mother. We despise mother earth to such an extent that we abuse her, poison her and try to control her and the same is true of human mothers. I for one have resisted this and have borne three children without ultrasound, foetal

heart monitoring, hospitals, pain relief, and formula. My eldest child has Asperger's syndrome, and I am convinced that this is less severe as I fed him every two hours on demand with the best nature can provide and with the live neurons in breast milk his brain was mended and developed so that there is very little to distinguish him from others – except he is a touch more intelligent in some respects and less socially adept in some circumstances. My children are my proof that 'breast is best' and 'mum knows best' when she is in tune with her femininity and mother earth.

Being a mum is a 24-hour a day dedication for life and it is often demanding and tiring, but this pales against the reward and satisfaction that our nurtured children bring.

Emma Christy
By email

NUTRITION AND ADHD: NANNY KNOWS BEST

Studies do show the connection between nutrition and behaviour in prisons, and we commend you for bringing it to the attention of your readers in ASBOs Vs Nutrition, *Ecologist* March 2006.

Nowadays, it seems that every teacher and mother

knows from experience 'at the coalface' that children's behaviour is affected by what they eat, to a greater or lesser extent; yet the required body of scientific evidence to support this 'anecdotal' knowledge does not exist. We suggest that this is because the majority of health research is funded by pharmaceutical companies, and they tend to pay for trials of interventions that are patentable, with an eye to future profits.

Furthermore, some well-designed, compelling studies such as the one Bernard Gesch conducted at the Aylesbury Young Offenders Institution are, bafflingly, ignored by those who could implement his findings.

The Hyperactive Children's Support Group promotes research into the dietary/nutritional approach to ADHD (attention deficit/hyperactivity disorder). We know that pupil referral units have a high proportion of ADHD children who have been excluded from school. By extension, the Young Offenders Institutions and the prisons may also have significant numbers of inmates with ADHD. We would like to know the exact figures.

It seems to us that while they are under 18, the nation's youth, whether behaving well or badly, does need the so-called 'nanny state' regulating its diet, because this group does not have the knowledge to discriminate in food choices.

A dietary/nutritional approach to behavioural problems is effective, cheaper than medication, and free from side effects.

Griselda Halling (Trustee)
Hyperactive Children's Support Group
Sheriff House, Stockbridge
Hants SO20 6EX

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

A NATURAL CURE

What a splendid article by Jonathan Leake on Georgina Downs, ('Pesticide Nun', *Ecologist* April 2006) the determined, tenacious and brave woman campaigning to get 'the grey suits' in government to listen to those people in rural communities being literally legally poisoned by the products of the chemical industry.

When we moved to a Yorkshire village surrounded by fields I was shocked to find that many of the children in the village suffered from respiratory problems, especially at crop-spraying times. When my son also began to suffer severe breathing difficulties – hoarse coughing and streaming eyes – I decided to try homoeopathy to ease his symptoms, having begun to study the subject. I was lucky and picked out the right remedy and within minutes he was feeling better, and in fact suffered no more symptoms at all having had his immune system strengthened.

Children respond very quickly to remedies, just as they respond quicker than adults to the poisons in pesticides. Using remedies to cure symptoms that should



never have been allowed to develop is not a long term cure to a serious threat, but at least it is something people know they can use safely – as opposed to the chemicals in medicines doled out in doctors' surgeries and made by the pharmaceutical industry, partners in crime to the chemical industry that caused the problem in the first place. (But don't just guess at a homoeopathic remedy, visit a licensed practitioner).

Jane Jack
By email

GENUINE HORSEPOWER: A GREEN – AND FUN – SOLUTION

I note that you almost completely ignore the million

or so horsepower available at any one moment in the UK. This source is pretty evenly spread, environmentally neutral, independent of light, wind and tides. I am currently using it to power an organic quad bike to great effect. Maximum speed around 30mph with the 0.25hp model, amazing off-road ability, voice-activated control system, no fumes, no noise...

The UK has, for reasons best known to itself, forgotten 99 per cent of its horsepower traditions, ie the working-class ones, and chosen to preserve the one per cent of upper-class traditions. Horses are no longer equated with horsepower or with work; yet, within their limitations, they are incredibly useful.

Come and drive an organic quad bike, or we can run a comparison of my 0.25hp organic against any of the vastly more powerful versions on the market. Whatever else, it is a fun day out...see www.saddlechariot.com for more.

Simon and Kate Mulholland
Appleby in Westmoreland
Cumbria CA16 6JB

BLUEPRINT FOR SURVIVAL 2 PLEASE

Back in 1972 I recall you devoting a whole magazine to this topic, and it occurred to me that it would be interesting to re-run it, and see what had changed in the last 34 years. Meanwhile, the measures politicians agree to and implement appear relatively puny, and seem unlikely to achieve much. In general they seem to be terrified of having to face up to the consequences of the situation, and of having to tell their voters what to expect.

What we seem to need desperately is a new Blueprint for Survival, and your publication is probably the one place where this could happen. I really hope it does, and soon.

Graham Huntrods
Skipton, N. Yorks

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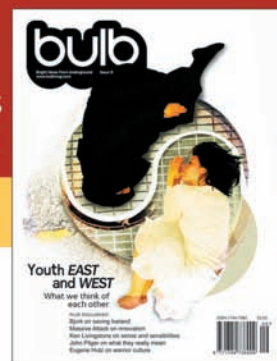
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BJORK ON SAVING ICELAND | MASSIVE ATTACK ON INNOVATION | KEN LIVINGSTONE ON SENSE AND SENSIBILITIES | JOHN PILGER AND WHAT THEY REALLY MEAN | EUGENE HUTZ ON WARRIOR CULTURE

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EAT A MCNUGGET, KILL THE RAINFOREST

Dozens of seven-foot chickens invaded McDonald's outlets across the UK to expose the link between the fast food chain and the destruction of the Amazon.

Chicken nuggets served by McDonald's in the UK are a primary cause of Amazon deforestation. A new report by Greenpeace – *We're Trashin' It* – says chickens supplied to McDonald's UK are reared on soya grown on cleared land in the Amazon.

The soya is supplied by the \$70 billion a year agro-giant Cargill, which runs a port and 13 soya storage works in the Amazon region. Cargill ships Brazilian soya to its Hereford-based

poultry subsidiary Sun Valley, which supplies up to half the chicken sold by McDonald's in the UK and Europe.

Greenpeace says soya cultivation demands massive chemical input and leads to rapid soil erosion and degradation. Most of the 25,000 square kilometres of Amazon rainforest felled last year were cleared for soya.

The report says: 'In the last three years 70,000 square kilometres of the Amazon have been destroyed. This equates to six football pitches a minute. Or 12 pitches in the time it takes to cook a Chicken McNugget.'

MONTANA CAN MELT, SAYS BUSH

Environmentalists have petitioned UNESCO to declare Glacier National Park in Montana endangered. The US Environmental Protection Agency says the World Heritage site's 27 glaciers could disappear by 2030 with continued global warming. The US government has opposed the petition by the Centre for Biological Diversity and 10 partners.

The Bush administration urged against reclassification under the World Heritage

Convention, arguing that the science behind global warming is untested. The paper says: 'There is not unanimity regarding the impacts, causes, and how to or if man can affect the changes we are observing.'

'There is no compelling argument for the Committee to address the issue of global climate change – especially at the risk of losing the unified spirit and camaraderie that has become synonymous with World Heritage.'



GREENWASH

Virgin Atlantic has announced that it is to plant trees to offset the CO2 emissions from the limousines it uses to ferry passengers to airports. It has been calculated that planting a few hundred trees annually should do the trick. However, if the company adopted the same policy for its fleet of 33 aircraft, it would have to plant 59 million trees annually, covering more than 130,000 acres of land.



URGENT NEED TO TAME FARMING'S THIRST

The International Water Management Institute (IWMI) has called on researchers to improve water efficiency in agriculture. A report released at the World Water Forum in Mexico says global demand for water will double with demand for food by 2050. IWMI director general Frank Rijsberman said: 'It takes 70 times more water to grow the food we eat every day than we need for drinking, cooking, bathing and other domestic needs.' In Africa and Asia, 2,000 litres of water are used to produce a typical kilogram of rice or wheat. In an efficient system, 500 litres are sufficient.

BIODIVERSITY BREAKTHROUGH

Thirteen countries have agreed to set up new transnational parks, or to link existing national parks, in an effort to promote biodiversity across borders. Vast new reserves in Central Asia, South America, the Pacific Islands and Borneo were announced at the 8th UN Conference on the Convention on Biodiversity in Brazil. The largest is a 695,000 square mile Silk Road Reserve in the

Caucasus Mountains of Central Asia. The reserve will span 44 per cent of the combined area of Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan and Turkmenistan. James Leape of the World Wildlife Fund said: 'This is one of the most exciting things we are seeing – very large scale initiatives by countries to create networks of protected areas.'



US CHURCH LEADERS APOLOGISE FOR BUSH

A coalition of American church leaders apologised to other nations at an international conference for 'the violence, degradation and poverty our nation has sown'.

The statement was issued to the World Council of Churches, the largest gathering of church leaders in nearly a decade, with 4,000 delegates representing 350 churches.

It primarily apologised for the Iraq war. Delegates were told: 'Our country responded [to the September 11 2001 attacks], by seeking to reclaim a privileged and secure place in the world, raining down terror on the truly vulnerable among our global neighbours ... entering into imperial projects that seek to dominate and control for the sake of national interests.

'Nations have been demonised and God has been enlisted in national agendas that are nothing short of idolatrous.'

However, it went on to address the issue of climate change and accused Washington of treating the world's 'finite resources as if they were private possessions'. The statement concluded with an appeal for forgiveness.

The US churches said they had 'grown heavy with guilt' for not speaking out against the Iraq war and issues such as climate change.

WHAT WE LEARNT THIS MONTH...

■ The average Briton spends just under three hours a day surfing the internet and two and half hours watching television, according to a survey by Google.

■ Fairtrade sales have grown more than 10-fold since 1998, rising from £16.7 million annually to £195 million this year. Meanwhile organic sales are set to hit £1.4 billion.

■ Reebok has recalled a charm bracelet that had been given as a free gift with trainers aimed at children after a four-year-old boy from Minnesota died of lead poisoning. The boy had swallowed the heart-shaped charm, which was found to be made from 99 per cent lead.

■ Allotment owners in Northumberland have called in armed guards to protect their vegetables from a rabbit. The animal, which leaves paw prints the size of a deer and can uproot prize leaks and onions, has been described as a monster.

■ An exhibition in Germany about depression and madness has been such a huge hit that the gallery has had to extend its opening times. 'There is a culture of pessimism in Germany,' the curator said.

■ Meanwhile, a German man who relaxed by going to the woods after work to let off steam with a hearty belly laugh has been told to stop or face a £4,000 fine or six months jail, after a complaint was made by a jogger.

■ An Essex woman found a snake in a bag of broccoli bought from Tesco. The broccoli came from Spain, adding a whole new dimension to concerns over food miles.

■ The locks are being changed on a nuclear power station in Phillipsberg, Germany, after officials admitting losing the keys back in March.

■ A giant tortoise, believed to have been the oldest animal in the world, has died at the ripe old age of 255 at his home in a zoo in Kolkata, India.

■ A burger restaurant in Pennsylvania has put a 15lb burger on the menu to attract customers. Diners who can finish the £25 burger in under five hours win £200, a T-shirt and have their name posted on the pub's wall of fame. They also get the burger for free.

■ Smog reduces sperm count, a study in California has found.



SUPERMARKET PORK FROM FATAL FACTORY FARM

Compassion in World Farming (CIWF) has condemned 'appalling' animal welfare practises at Smithfields Food, an American meat corporation that supplies pork products to UK supermarkets including Tesco, Sainsbury's, Asda and Waitrose. CIWF called on the EU to take action against the kind of intensive factory farming practised by Smithfields in Poland.

Up to 13,000 pigs are kept at one industrial-scale Smithfields installation at Wieckowice. Undercover filming there last year showed hundreds of young pigs, fattened on growth-promoting antibiotics, packed into barns with no daylight or exercise. Twenty-six pigs died in one barn at the site last summer. See www.theecologist.org/smithfield_foods

PHOTOGRAPH BY CIWF

MOTHS BULLDOZED TOWARD EXTINCTION

Save the moth doesn't have quite the same ring to it as save the whale, laments David Attenbrough in the introduction to a 10-year study by Butterfly Conservation into the state of Britain's larger moths. These bellwethers of the UK's ecosystem are disappearing at an alarming rate, the report says. The study identified 226 species, meaning that 111 have become extinct since 1968. Moths are an important part of the food chain and their loss will have a knock-on effect on a vast number of species, particularly birds,

bats and invertebrates.

The decline mirrors the devastating change in land use. The report says that post-war development has resulted in the loss of: 97 per cent of lowland flower-rich grassland; 90 per cent of fenland; 80 per cent of chalk and limestone grassland; 75 per cent of actively coppiced woodland; 60 per cent of lowland raised bogs; 50 per cent of ancient woodland; 67 per cent of hedgerows; and 40 per cent lowland heathland.





PROSTATE CANCER THREAT TO KENYA'S PLUM TREES

Conservationists in Kenya's Kiambu region have launched a campaign to save the *Prunus Africana* tree, or African Plum Tree, which is being illegally cut down and sold to European countries to be used as a prostate cancer treatment.

The tree's bark is used to produce a medicine that alleviates the symptoms of prostate cancer and benign prostatic hyperplasia. Researchers at the Brackenhurst Highland Arboretum in Kenya will run trials to see if the same drug can be extracted from the tree's leaves in order to save the tree from the trade in bark, the removal of which causes the tree to die.

Prunus Africana is listed under the Convention on International Trade in Endangered Species of wild flora and fauna (CITES) as an endangered tree that will become extinct if trade is not regulated.

“

The Canadian Prime Minister says the so-called “cull” is economically and environmentally justified, but this is untrue. The seal population has looked after itself for thousand of years without human intervention, and, as the world knows, this slaughter is about one thing only: making money.

Morrisey denounces Canada's economic justification for seal culls as he announces his decision to boycott the country on his world tour.

”



HOMICIDAL SAPIENS

A new UN report claims that humans are responsible for the worst spate of extinctions since the dinosaurs were wiped out 65 million years ago.

The report warns that the current extinction rate is up to 1,000 times faster than at any time in the past. 844 animals and plants are known to have disappeared from the earth in the last 500 years and the report warns that the causes of biodiversity loss show no signs of abating.



GLOBAL BANK ATTACKED FOR ENVIRONMENT POLICY

Global investment bank Goldman Sachs' chief executive Henry Paulson came under sustained attack from shareholder groups at last month's AGM for adopting an environmental policy that vows to protect forests and curb developments that boost emissions of greenhouse gases. Despite a year of record turnover and earnings, Paulson spent much of the meeting defending the policy, which has been hailed as a turning point by highly respected environmental campaign groups, such as Rainforest Action Network (RAN).

However, the policy was not the only contentious issue at the AGM, with Paulson, who is also chairman of the conservation group Nature Conservancy, coming under attack from two groups.

The National Legal and Policy Centre called for Goldman Sachs to publish a conflict of interest report, arguing that Paulson allowed personal interest to interfere with the bank's operations. The Free Enterprise Action Fund, which opposes any interference with free markets, has vilified the policy in a sustained letter-writing campaign. Last year the bank earned \$5.63 billion dollars.

To see the policy framework in full, visit <http://www.gs.com>



ILLEGAL LOGGERS WILL HALVE AMAZON RAINFOREST

A study published in *Nature* predicts that, by 2050, Brazil will lose more than 40 per cent of its Amazon rainforest primarily to illegal logging unless existing conservation laws are enforced. The study by the University of Minas Gerais shows that 73 per cent of today's rainforest could be conserved with effective policing of protected areas. A crackdown on illegal logging could save one million square kilometres of rainforest and spare the environment 17 billion tonnes of carbon emissions. Around 30 per cent of Brazil's rainforest is protected. Greenpeace says 80 per cent of the deforestation in Brazil is illegal.

500
MILLION

The predicted annual number of airline passengers expected by 2030, a 150% increase

“

Blair has been uttering nonsense lately about Kyoto and such, real la la stuff ... looks like the American right have finally eaten his mind ... blah blah why on earth would I meet this man? Initially when it came up I tried to be pragmatic. But Blair has no environmental credentials as far as I'm concerned. I'll just shout my mouth off from the sidelines.

Thom Yorke of Radiohead explains why he refused an invitation to discuss climate change with Tony Blair

”

FLUORIDE HEALTH THREAT

American scientists have called on the US Environmental Protection Agency to lower the maximum level of fluoride in drinking water from 4mg per litre. The National Research Council report by Dr J William Hirzy of American University didn't set a base target, but said fluoride levels of just 1mg per litre – common in the UK – present a real health threat (echoing warnings made in *The Ecologist* in 2002 by Dr Peter Mansfield).

The UK Water Industry Act sets a maximum fluoride level of 1.5mg per litre of tap water. Around 10 per cent of the population lives in fluoridated areas, mainly in the Midlands and north east. Fluoride has been linked to thyroid disease, cancer, diabetes, arthritis and dementia.

WORLD'S LARGEST DAM TO OPEN EARLY

The world's largest dam is set to open this month (May), nine months ahead of schedule. Environmentalists warn that the mile-long Three Gorges Dam on the Yangtze River in eastern China will have a catastrophic environmental impact.

The \$24 billion hydroelectric project will displace nearly two million people, flooding 395 square miles (632 square kilometres), drown 13 cities, swathes of prime arable land and hundreds of archaeological sites.

Aviva Imhof of the International Rivers Network said: 'Due to the enormous concentration of industry and cities upstream, the reservoir is likely to become a toxic cesspool of effluent, industrial pollutants and rubbish.'

The Chinese government said that 80 cracks have appeared in the dam since it was part-filled in May 2003. Stuart Crampin, a seismologist at the University of Edinburgh, has warned that the reservoir sits over significant seismic faults. He said pressure at depth

could trigger an earthquake that could breach the dam, threatening the industrial city of Wuhan 300 kilometres downstream.

Funding for the dam by the Chinese Development Bank was underwritten by Morgan Stanley Dean Witter, Citigroup and Merrill Lynch, among other financial giants.



NUCLEAR ROUND-UP ☢️ NUCLEAR ROUND-UP ☢️ NUCLEA



CHERNOBYL: the legacy

The French state-owned contractor building the Olkiluoto 3 nuclear reactor in Finland has been accused of taking 'a less than professional approach' to decommissioning the Chernobyl

nuclear power plant.

In 1999, Framatome, a subsidiary of nuclear giant Areva, was contracted to build an interim facility to store 3,000 tonnes of spent fuel at Chernobyl. Costs on the project have rocketed from €68 million to €275 million and a completion date of 2003 has been put back to 2010. Tetyana Amosva of the Ministry of Emergencies said the delays are costing Ukraine €15 million a year.

In 1995, Ukraine agreed with the G7 nations to close the Chernobyl plant by 2000. A memorandum of understanding pledged international aid to Ukraine to fund decommissioning. The aid is managed by the European Bank for Reconstruction and Development (EBRD).

EBRD has refused to allocate further substantial funds to the project because of the extended timeframe and spiralling costs. The Ukraine government has suspended work on the facility, pending talks with Framatome. Emergencies Minister Viktor Baloha said Ukraine is prepared to work without the contractor. Meanwhile, the Chernobyl management has started to move spent fuel from the reactors to an ageing Soviet store.

The Chernobyl site is highly unstable. The Ukraine government said four tonnes of radioactive dust have leaked from the shelter enclosing reactor 4 – site of the meltdown – since its construction within months of the explosions of 26 April 1986. The concrete emergency shelter is decaying and at risk of catastrophic collapse. Work cannot begin on a replacement until spent fuel from reactor 3 is removed and stored.

■ A new study of the Chernobyl disaster shows that infant death rates rose by 11 per cent between 1986 and 1989 in areas of the UK contaminated by radioactive fallout from the explosions. The study's author, epidemiologist John Urquhart, said the material may have

killed more than 1,000 British infants. Bristol, Wales and the West Midlands were among the areas most affected by 'black rain'.

Before the catastrophe, infant death rates had been falling by an average of four per cent a year across the country.



Left: Miroslava is one of 15,000 Ukrainian children who have been sent to Cuba for radiation poisoning treatment since 1990. She receives daily treatment using placental extract and ultraviolet lights, developed by the Cubans



PHOTOGRAPHS BY GREENPEACE/COBB



CLEAN-UP COSTS SHOW 'ECONOMIC AND ENVIRONMENTAL INSANITY' OF NUCLEAR

The Nuclear Decommissioning Authority (NDA) says the UK's nuclear waste clean-up programme could cost £72 billion – £14 billion up on their last estimate. Environmentalists say the true cost is nearer £160 billion as the NDA total omits the cost of long-term storage of nuclear waste, or decommissioning at British Energy's seven nuclear power stations and the Ministry of Defence's nuclear sites.

The NDA clean-up programme was launched last year to stabilise the country's vast stockpile of hazardous nuclear waste. Friends of the Earth director Tony Juniper said the scale of the clean-up costs 'demonstrates the economic and environmental insanity of nuclear power.'

The Committee on Radioactive Waste Management says there are 2,000 cubic metres of high-level radioactive waste, 349,000 cubic metres of medium-level waste and 1.93 million cubic metres of low-level waste at UK nuclear sites. They estimate that an additional 18 million cubic metres of earth and rubble are contaminated.

The NDA was set up under the Energy Act of 2004 to manage the decommissioning and clean-up process at 20 nuclear sites including Sellafield and Dounreay. Eighty per cent of radioactive waste held at NDA sites is in untreated form – unstabilised and potentially mobile. The NDA aims to complete decommissioning by 2030.

REAL LIFE NUCLEAR EXPERIMENT



The town of Olkiluoto in Finland is a potent symbol of

our times.

Look out towards the Baltic Sea and the ravages of climate change can be seen in the receding glaciers and ice packs. Turn inland, and rising from the ground is the first nuclear power station to be built on mainland Europe for 10 years. It is a prototype, using previously untried technology to achieve output levels far in excess of its predecessors.

Known as a third generation European pressurised water reactor (EPR), the facility has been hailed as the answer to all our energy problems. The developers say, 'The EPR is state-of-the-art technology in terms of economy, safety and environmental protection.' The electricity generated will be 10 per cent cheaper than that generated in nuclear reactors currently in operation, coming in at three euro cents per kilowatt hour. This is because the EPR is designed to use 15 per cent less uranium to generate the same amount of electricity. The environmental benefit of this is that it will produce less spent fuel, which reduces the cost of disposal.

Its political significance cannot be underestimated. The overwhelming majority of leaders at a European Union summit in March, including Tony Blair, strongly backed the revival of nuclear power as the answer to Europe's growing reliance on

overseas energy supplies and to combat climate change.

Henry Lami, a Greenpeace energy expert, sees the EPR differently: 'We are entering the realms of a real life nuclear experiment.' As do consulting engineers John Large and Associates, independent nuclear analysts commissioned by Greenpeace. 'It's being built too fast, too soon and in the wrong place,' its author John Large told the *Ecologist*.

Too fast...

The EPR is being thrown up at an unprecedented speed. It has gone from planning application in 2004 to start of construction in one year. An extraordinary timeframe, considering similar proposals in America are scheduled to take seven years. The EPR is scheduled to start generating electricity in 2009. Alarmingly, the Franco/German consortium behind the EPR has been given the go-ahead on the basis of sketchy safety reports that are to be finalised 'on the job'. This 'make-do and mend as we go' approach is already being exposed as fatally flawed. One year in, construction is six months behind schedule and problems are mounting up. Welded seams on the reactor pressure vessel being made in Japan have failed safety tests and are being reworked. On site, meanwhile, the concrete being used to construct the reactor base has been found to be too porous, meaning it is prone to contamination. 'Concrete cancer' is how this fatal flaw was dubbed when



diagnosed in the UK during the 1970s. It resulted in the demolition of many buildings and motorway bridges, just 10-20 years after they were built. The EPR would have to survive far longer than that: its lifespan is for 60 years in production and around 250 years in wind down and clean up time. And here's the rub. This problem has only been identified after the event, indicating that the Finnish regulators are failing to keep up with the construction timetable.

Too soon...

The Large report concludes that the construction schedule of five years is too ambitious for such a project and that safeguards against meltdown and, more importantly post 9/11, a terrorist attack are simply being busked. Operational safeguards and security at such a facility are paramount, but most of the information regarding these issues has been kept secret on the basis that releasing details of them will threaten the integrity of safety and security at the

facility. What is known, however, is ominous.

In the event of an emergency, computers will take over management of the reactor, overriding all human input and disallowing intervention of staff on site. This suggests that all possible malfunctions have been predicted – an astonishing claim given the fact that this is a wholly new reactor. One eventuality that can't have been assessed, says Large, is the threat of terrorist attack, which post 9/11 is probably not possible.

The developers say this problem has been designed out. Essentially they have circled the main reactor building with 'sacrificial buildings' that would stop a plane hitting its target. However, these buildings aren't decoys, they have an operational relationship with the reactor and there is no supporting evidence from the developers to prove that the reactor would not be adversely effected by the shock waves from such an event. Nor is it explained how communications to the reactor

ROUND-UP ☢️ NUCLEAR ROUND-UP ☢️ NUCLEAR ROUND-UP ☢️

would be maintained. Would the computers designed to manage a shutdown still be operational in such an eventuality?

Wrong place...

With climate change forecasts predicting sea level rises of six metres in the next hundred years the siting of the facility, with its safety store 500 metres beneath the reactor, is a concern that seems to have been studiously ignored. Yet this is not the reason the Large report gives that the reactor is being built in the wrong place. Its primary concern is that Finland does not have the expertise to regulate the building of such a unique facility.

Of the country's nuclear regulator STUK's capability, Large said, 'We have a situation here where the mouse is bigger than the cat.'

The 'mouse' is Framatome ANP, the consortium comprising the French firm Areva, which is 85 per cent state owned and will be supplying the EPR building, and the German Siemens, which will supply the turbines. They come to the project with resources at

their disposal from operating nearly 100 nuclear power plants built around the world.

The cat is the Finnish authorities. The country's nuclear regulator STUK last oversaw the building of a nuclear generator 24 years ago – a Russian model that had already been built elsewhere and about which much was known. Currently STUK only has a staff of around 90 – including secretaries and cleaners – and yet they are expected to set the safety standards for an as yet unknown, untried and untested nuclear power station.

It also assumes that the Finns have the political will, economic might and regulatory expertise to halt the development. This seems unlikely given that the Finnish government, trade unions and business leaders backed the nuclear option as a solution to meeting their climate change targets under Kyoto, and that a likely showdown with France would probably result in the country having to pay out millions, if not billions of euros in compensation.

Determined to build at any price

When the foundation stone

of the EPR was laid in October 2005 it was heralded as the first privately financed generator in the world. Previously no nuclear generator has managed to produce electricity at a price acceptable to the market without huge subsidies. The EPR has apparently squared this circle. Not so, say Greenpeace and the European Renewable Energy Foundation (EREF). Rather, they say, the EPR is a loss leader, supported by government subsidy.

For a start the generator has been offered to the Finnish power firm TVO at a fixed price of €3.2 billion, 25 per cent less than the price quoted to France for a proposed EPR in Normandy. This means that if costs of building the EPR spiral above the agreed price, then Framatome will absorb the additional cost, thereby subsidising the true cost of the energy supplied. As the price is guaranteed, this makes it highly attractive to investors. Further disguising the cost of the power produced is the fact that TVO, the Finnish purchaser of the EPR, is not seeking to make any profit out of the power produced by the EPR, meaning the electricity is to be sold for

the cost of manufacture. On that basis, electricity supply from the generator is being pre-sold now at what is believed to be €25 per megawatt hour, about 10 per cent cheaper than reactors working today.

Clean up costs have not been factored into the price. The Finns are scheduled to build a repository for the waste that will be more complex in make-up as a result of being burnt in the reactor for longer.

TVO, a consortium of Finnish forestry industries and public energy companies, is financing 20 per cent of the deal in cash and has secured loans of €1.95 billion at the highly favourable rate of 2.6 per cent and a bilateral loan of €550 million. France has also underwritten the project to the tune of €610 million in export credits.

EREF has also calculated that alternative energy sources could produce the same amount of electricity, if not more, for the same price.

The package, says Greenpeace's Lami, shows that this is a strategic development that the nuclear industry was determined to build 'at any price'.



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Feeding the rich, failing the poor

As avian influenza continues to sweep across the globe, governments and UN agencies have found a convenient scapegoat in backyard poultry-keepers and migratory birds. But, as the West's dependence on cheap chicken products grows, so does the evidence that the global poultry industry is not only behind the spread of bird flu, but is also using it to drive small producers out of business. By Nick Langley

Conservation groups and organisations supporting sustainable agriculture have long argued that migratory birds and backyard poultry cannot be the main vectors of avian flu. The pattern of outbreaks doesn't follow the flyways of migratory birds, and the timing is wrong. There is, however, a strong correlation with trade routes such as the trans-Siberian railway.

After a year of being dismissed as the special pleading of pressure groups more concerned with biodiversity and animal welfare than human health and nutrition, these arguments have begun to receive heavyweight academic backing.

Writing in the journal *Proceedings of the National Academy of Sciences of the United States of America*, 28 of the world's leading avian-influenza virology specialists found that poultry from China had repeatedly spread the virus to neighbouring and more distant countries like Vietnam and Indonesia, and that 'transmission within poultry is the major mechanism for sustaining H5N1 endemicity in the region'.

Flawed factory farming

Other evidence, albeit circumstantial, comes from reports prepared by the UN's Food and Agriculture Organization (FAO) and the US Department of Agriculture (USDA). These show that outbreaks in one Asian country after another began in intensive poultry farms, which had taken day-

old chicks directly from Thailand, the regional hub of the poultry business.

The Thai poultry industry is a major presence in China, with one company claiming to operate in all but three provinces. Thai poultry companies have also invested heavily in Turkey, where UN trade figures show live poultry imported from Thailand.

The correlation between outbreaks and industry is compelling. What's more, poultry multinationals, having propagated and spread the disease, are using avian flu as a pretext for tightening their grip on world food production. Thai giant CP Foods, for example, which claims to control 80 per cent of industrial poultry production in Vietnam, plans to double its output there to a million chickens per week by the end of the year.

'CP will succeed in turning a crisis into an opportunity of development,' Sooksunt Jiumjaiswanglerg, president of CP Vietnam Livestock, told news agency Agence France-Presse (AFP).

Also quoted in AFP's report was Tony Forman, the FAO's avian-influenza technical adviser in Vietnam, who said a move to factory farms would make both public health and business sense. 'Groups prepared to invest in biosecure facilities in breeding, animal feed, slaughterhouses and food-processing may achieve a high level of return on their investment.'

The poor get poorer

The effect on smaller poultry producers, as well as on the rural poor in the developing world, will be devastating. In 2002, the FAO's own Hans Wagner noted: 'The main beneficiaries of the demand surge [for meat in Asia] are large-scale, urban, capital-intensive producers and processors and urban middle- and upper-class consumers. The overwhelming majority of the poor does not benefit.'

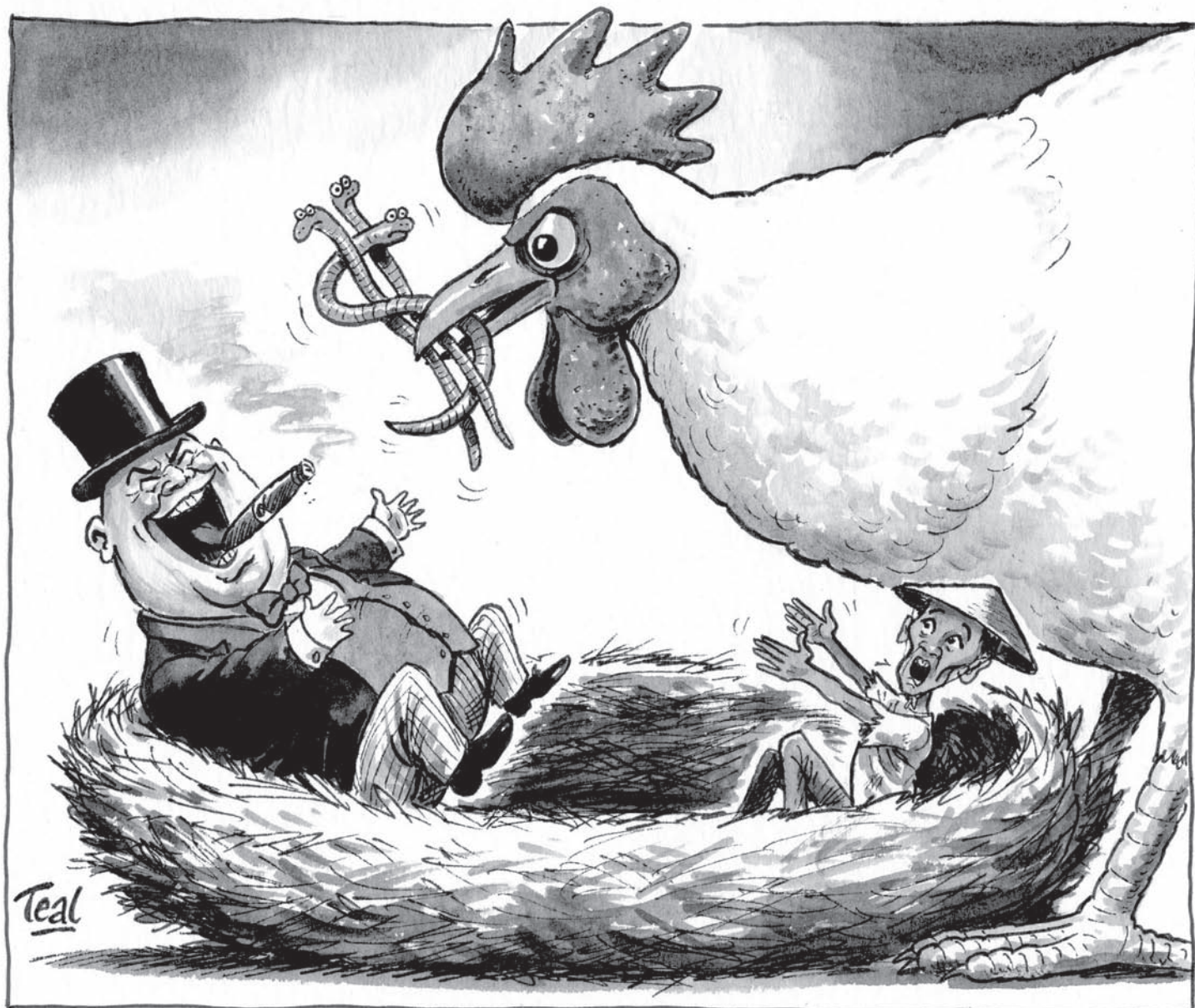
Devlin Kuyek of Grain, a biodiversity campaign group, explains what small-scale poultry means to the developing world. 'Backyard farming is not an idle pastime for landowners. It is the crux of food security and farming income for hundreds of millions of rural poor in Asia and elsewhere, providing a third of the protein intake for the average rural household. Nearly all rural households in Asia keep at least a few chickens for meat, eggs and even fertiliser, and they are often the only livestock that poor farmers can afford.'

In January 2004, following poultry flu outbreaks across Southeast Asia, He Changchui, head of the FAO's Regional Office for Asia, said the poultry industry needed to be restructured with 'a pro-poor and environmentally friendly approach'.

But, by February 2004, Wagner was telling *Time* magazine that 'enclosed' factory farms, like those run by Thailand's transnational giant CP Foods, were 'the safest way to go'. Sadly for Wagner and CP, February also saw a bird flu outbreak on one of CP's enclosed factory farms in Vietnam, where the army had to be called in to slaughter 117,000 birds.

Kuyek says Southeast Asian governments, backed by the FAO, want farmers to set up mesh screens or bamboo enclosures for their poultry. Unless they do so, they won't be eligible for

Backyard farming is the crux of food security and farming income for hundreds of millions of rural poor in Asia. Nearly all rural households in Asia keep at least a few chickens...



compensation if their flocks have to be culled. 'But the costs are out of reach for smallholders, who typically make less than US\$1 a day. In places like Thailand, this has immediately forced small farmers to abandon poultry.'

In Vietnam alone, the FAO admits, the industry 'restructuring' it now recommends would lead to up to a million small, commercial poultry producers losing their income.

The only alternative to losing their livelihoods altogether is a contract with a big producer. Just what a contract with CP Foods and its like means for the small farmer is helpfully illuminated by a guest lecturer to the FAO: 'Broiler husbandry is an occupation that requires a 24-hour dedication to the task. This is the main

reason why the contract system has been found to be more successful than company-owned farms. Such dedication is easier to find in a farmer-owner with a stake in the profit outcome than in a salaried worker. A large bank loan has a way of concentrating the mind to proper priorities at 3.00 a.m. when the weather is bad.'

Contract farmers must buy day-old chicks, feed, fuel, vaccines and technical assistance from the larger company and, in return, are supposed to get a set price. But according to the NGO Focus on the Global South, corporations can renege on the price agreed whenever it suits them.

What about the mission to feed the poor? Those who haven't completely lost their livelihoods can, of course, buy cheap

industrial chicken from outlets such as the Lotus chain, set up in Thailand by Tesco and its partner, CP Group. But, by 2005, the FAO's priority had apparently changed anyway. In the report on outbreaks in five Southeast Asian nations, the authors speak of 'the need to supply cheap protein to growing populations who are becoming richer'.

It's a rather less inspiring mission, which might be paraphrased as 'supplying cheap chicken to the newly affluent to meet aspirations towards a Westernised, meat-heavy diet'.

And yet asia's newly affluent are not the ultimate beneficiaries. According to the thai broiler association (based in cp tower, bangkok), before the bird flu outbreak thailand exported up to 90 per

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cent of its poultry, mostly to Europe and Japan. The British Poultry Association says that in 2003, UK traders imported around 50,000 tonnes of chicken meat from Thailand, mostly frozen cooked breast meat for ready meals, sandwiches and prepared convenience foods. Major UK supermarkets, notably Tesco, are among the customers.

Cheap protein for western supermarket customers? Now that's a really uninspiring mission.

And yet, surely, revenues from these exports are benefiting the Thai people, including the poor? Not according to Focus on the Global South, which tells us that, while the value of Thailand's food exports increased by 52 per cent between 1995 and 2000, the average debt per farming household increased by 51 per cent.

According to Kuyek, in addition to its impact on the poor, the FAO's endorsement of corporate production is the exact opposite of what's needed to control bird flu. 'The low incidence of outbreaks in Laos suggests that the key to protecting backyard poultry and people from bird flu is to protect them from industrial poultry and poultry products.'

This is not, however, what the FAO has in mind when it talks of restructuring. They prefer to believe that the poultry industry has cleaned up its act, and can be relied on to police itself. But it beggars belief that high biosecurity standards can be maintained when tens of thousands of contract farmers, operating on the smallest of margins and with every incentive to cut corners, are constantly interchanging inputs and stock with 'enclosed' poultry factories.

Backyard producers, geared to local and family needs, don't send their birds across borders, and avian flu outbreaks in smallholdings tend to burn themselves out. But if the FAO gets its way, the export-driven poultry production model, riddled with corruption and prone to lapses of control even in the best-regulated countries, could be the only one we have.



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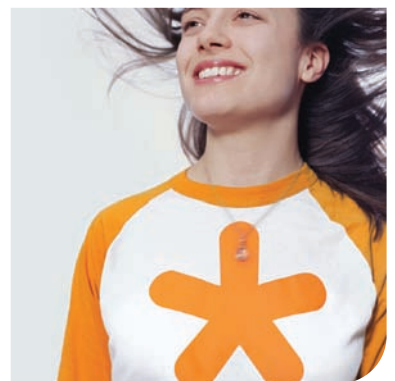


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Bush didn't bungle Iraq you fools

...the mission was indeed accomplished. By **Greg Palast**

On the third anniversary of the tanks rolling over Iraq's border, most of the 59 million Homer Simpsons who voted for Bush are beginning to doubt if his mission was accomplished.

But don't kid yourself – Bush and his co-conspirator, Dick Cheney, accomplished exactly what they set out to do. In case you've forgotten what their real mission was, let me remind you of White House spokesman Ari Fleisher's original announcement, three years ago, launching of what he called 'Operation Iraqi Liberation'. O.I.L.

How droll of them, how cute. Then, Karl Rove made the giggling boys in the White House change it to 'OIF' – Operation Iraqi Freedom. But the 101st Airborne wasn't sent to Basra to get its hands on Iraq's OIF.

"It's about oil," Robert Ebel told me. Who is Ebel? Formerly the CIA's top oil analyst, he was sent by the Pentagon, about a month before the invasion, to a secret confab in London with Saddam's former oil minister to finalise the plans for 'liberating' Iraq's oil industry. In London, Bush's emissary Ebel also instructed Ibrahim Bahr al-Ulum, the man the Pentagon would choose as post-OIF oil minister for Iraq, on the correct method of disposing of Iraq's crude.

And what did the US want Iraq to do with Iraq's oil? The answer will surprise many: and it is uglier, more twisted, and devious than anything imagined by

the most conspiracy-addicted blogger. The answer can be found in a 323-page plan for Iraq's oil secretly drafted by the State Department. Our team got a hold of a copy; how doesn't matter. The key thing is what's inside this thick Bush diktat: a directive to Iraqis to maintain a state oil company that will 'enhance its relationship with OPEC'.

Enhance its relationship with OPEC? How strange: the government of the United States ordering Iraq to support the very OPEC oil cartel that is strangling our nation with outrageously high prices for crude.

Specifically, the system ordered by the Bush cabal would keep a lid on Iraq's oil production – limiting Iraq's oil pumping to the tight quota set by Saudi Arabia and the OPEC cartel.

There you have it. Yes, Bush went in for the oil – not to get MORE of Iraq's oil, but to prevent Iraq producing TOO MUCH of it.

You must keep in mind who paid for George's ranch and Dick's bunker: Big Oil. They – and their buck-buddies, the Saudis – don't make money from pumping more oil, but from pumping LESS of it. The lower the supply, the higher the price.

It's Economics 101. The oil industry is run by a cartel, OPEC, and what economists call an 'oligopoly' – a tiny handful of operators who make more money when there's less oil, not more of it. So, every time the 'insurgents' blow

up a pipeline in Basra, every time Mad Mahmoud in Tehran threatens to cut supply, the price of oil leaps. And Dick and George just LOVE it.

Dick and George didn't want more oil from Iraq, they wanted less. I know some of you insist, no matter what I write, that our President and his Veep are on the hunt for more crude so that you can fill your family Hummer cheaply; that somehow, these two oil-patch babies are concerned that the price of gas in the US is bumping up to \$3 a gallon.

Not so, gentle souls. Three bucks a gallon in the States (and a quid a litre in Britain) means colossal profits for Big Oil, and that makes Dick's ticker go pitty-pat with joy. The top oily-gopolists, the five largest oil companies, pulled in \$113 billion profit in 2005 – compared to a piddly \$34 billion in 2002 before Operation Iraqi Liberation. In other words, it's been a good war for Big Oil.

As per Plan Bush, Bahr Al-Ulum became Iraq's occupation oil minister; the conquered nation 'enhanced its relationship with OPEC'; and the price of oil, from Clinton peace-time to Bush war-time, shot up 317 per cent.

In other words, on the third anniversary of invasion, we can say the attack and occupation is, indeed, a Mission Accomplished. However, it wasn't America's mission, nor the Iraqis'. It was a Mission Accomplished for OPEC and Big Oil.

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Buying influence

Lord David Sainsbury's personal ambition and private wealth is dictating government policy on science. It's high time we the electorate called this unelected, bio-tech investor to account, says **Jon Hughes**

Lord David Sainsbury's life has all the hallmarks of a classic Hollywood script. An heir to the family fortune has to subordinate his twin passions for politics and science to family expectation. He goes to work in the family business. Embittered, for years his frustrations simmer. Then he starts to use his burgeoning fortune to fulfill his ambitions by proxy. He pours millions of pounds into think-tanks, political parties and scientific research. He becomes feted as the saviour of the universe. The Nobel prize awaits...

Fantasy? Unfortunately not. More like an unfinished biography. So how did our unelected, unaccountable, seemingly unsackable science minister Lord David Sainsbury come to bestride the worlds of science and politics in the UK.

Sainsbury has a charitable foundation, called Gatsby. Through Gatsby, Sainsbury funds research into GM and nanotechnology - the rearrangement of matter at the atomic and sub atomic level for use in everything from electronics to medicine. The arrangement dates back to 1987 when Gatsby helped fund the building of the Sainsbury Laboratory at the John Innes Centre (JIC) in Norwich. Since then JIC has received approximately £2 million a year via Gatsby to fund research. Sainsbury meanwhile has championed plant genetics as the holy grail of science. Before he became science minister Sainsbury once said that if a fairy godmother were to grant him a wish it would be to become a Nobel Prize winner in plant genetics.

He launched two firms to capitalise on his research, Innotech Investments and Diatech. Innotech has a substantial stake in a firm called Paradigm Genetics, which is involved in a joint GM-related venture with Monsanto. Diatech was Sainsbury's vehicle to obtain patents on GM plants.

The company secured three, potentially worth millions, in the late Nineties.

Successes that coincided with Sainsbury being made science minister in 1998 by the new Labour government. The post was a "cool Britannia" creation. Before 1998, science was named as part of the brief of the minister for industry and energy.

Sainsbury's appointment caused a stir, in a thoroughly modern manner. He'd given Labour money. A million in 1986, two in September 1987, in October he was ennobled, and a year later he was appointed science minister. That's fast-track promotion in anyone's book but surprisingly Hugo Young, the *Guardian's* esteemed political commentator rode to the rescue of Sainsbury. He poo-pooed the notion that there was a conflict of interest in Sainsbury being a GM investor and now minister. Sainsbury was so wealthy he was incorruptible, was Young's verdict.

This of course is a bogus argument, responding to a bogus allegation. No one really thinks Sainsbury is going to take a back-hander to help his mates out, or is really desperate to make the GM breakthrough for financial reasons. His reputed wealth is estimated at £1-2billion. Sainsbury wants more than money. In GM, he wants to be the man to find the science equivalent of The Beatles. This he is convinced is the key to unlocking the new tech 'industrial revolution'. That's why concerns were and still are raised.

Sainsbury came to the job with baggage, which he made no apology for. He resigned as chairman of Sainsbury's, and his GM vehicles and Gatsby contributions were put into blind trusts. His beliefs and his contacts weren't. When the government flew in the face of public opinion and gave the go-ahead for GM trials in the UK, Sainsbury was a

special adviser to Blair on GM issues. He met with officials from Monsanto at his government offices. He moved Diatech into £2m offices in Westminster eight days before he was appointed science minister.

The government's science Review Panel became something of a reunion for Sainsbury acolytes. Mike Wilson, formerly one of Diatech's chief scientists, and now chief executive of the Horticultural Research Institute (HRI) at Warwick University – HRI researches genomics – and adviser to the government on fruit and crop growing was there.

As was Professor John Gray from the Department of Plant Science at the University of Cambridge, who is also a trustee of the Sainsbury Laboratory, as well as being on the Science Advisory Panel of the Gatsby Charitable Trust. Professor Gray is also the chairman of the Trustees of the Gatsby organisation, Science and Plants for Schools, along with Judith Portrait, who manages Lord Sainsbury's blind trusts.

Also present, Professor Chris Leaver, a member of the John Innes Centre Governing Council and a Trustee of the John Innes Foundation, and Phil Dale and Mike Gale who both work at the JIC. Gale is also a director of John Innes Enterprises and a consultant to Plant Bioscience, which is jointly owned by the JIC and Lord Sainsbury's Gatsby Foundation.

Sainsbury isn't a case of poacher turned gamekeeper, for him it's a jobshare. That's the problem. Scientists who were, and in some cases still are, on his private payroll, are now beneficiaries of his public largesse. Through the Biotechnology and Biological Science Research Council as science minister Sainsbury distributes £330 million annually to scientific research.

As The Times was moved to say in

2002, ‘Suspicious minds looked at the 300 per cent increase in the government grant to the Sainsbury Laboratory (at the JIC) and pondered whether this might be linked to the fact that Lord Sainsbury of Turville is the Science Minister.’

There is nothing suspicious here. The only reason the JIC receives funding from Sainsbury’s public and private purses is his cast-iron, dead-cert, put your shirt on it belief that he’s onto a winner with GM, and its spin-off bio-technologies. Having boasted that this is the card that will trump the economic might of the Asian Tigers (India and China), Sainsbury in his government role has commercialised science.

To Lord Sainsbury altruistic science has little justification. Making science pay is a fundamental measure of good science to him, the results of which can be seen in the UK’s growing corporate-science culture.

In a recent *Financial Times* article, Lord Sainsbury heralded the fact that British universities had research deals with 199 companies in 2000, up from an annual average of 67 in the previous five years and a mere ‘handful’ before that. The UK’s ratio of companies to research spending is now more than six times greater than in the US. ‘It’s a dazzling record,’ Lord Sainsbury is quoted as saying and he laments the nation’s failure to celebrate such a ‘stunning change in the entrepreneurial attitudes of our universities’.

Not everybody shares Sainsbury’s belief that ‘good science’ is science that is potentially commercially productive. Professor Steven Rose of the Open University Biology Dept is among those who have commented critically on this emerging corporate science culture, ‘I think there is a very real problem from the point of view of university research in the way that private companies have entered the university, both with direct companies in the universities and with contracts to university researchers. So that in fact the whole climate of what might be open and independent scientific research has disappeared, the old idea that universities were a place of independence has gone. Instead of which one’s got secrecy, one’s got patents, one’s got contracts and one’s got shareholders.’

Since Sainsbury took office the overall science budget has risen from £1.3 billion annually to £3.4 billion next year. Sainsbury decides how it is to be spent. He is the kingmaker. GM scientists are the winners at the expense of exploring other solutions. Technology strategy boards have been established, international collaborative initiatives set in place, and bodies to support patent and copyright applications. Money is being pumped into smart materials – composites, engineering ceramics, technical textiles and electronic and bio-materials – biotechnology and nanotechnology under the banner of “sustainable development”.

“New materials technologies are crucial to meeting the energy efficiency requirements of the modern built environment and the drive for low waste, low carbon and resource efficiency under the sustainability agenda,” he told a meeting of the Industry Forum in January, but you could pull the quote from many a speech listed on his DTI website. “As such they provide an essential underpinning for the technological advancement of most value-adding sectors in the UK, such as automotive, aerospace, security, healthcare, oil and gas, electronics and retail. New materials can also enable major improvements to take place in many products.”

Hey, keep doing the do and the DIY, we can sort it out. Sainsbury has the answers for how we can keep on the road, in the air, drinking fizzy drinks. It is Sainsbury’s blind faith that is disturbing. It is the blinkered vision of the mad scientist. Objectivity be damned, Sainsbury knows the answer is GM, has done since his days at university when he became fascinated by DNA research. He isn’t going to change now. And he isn’t going to voluntarily move out of his elevated position.

As an unelected politician, Sainsbury’s ministry of science looks rather more like a personal fiefdom than a public office. For eight years Lord David Sainsbury of Turville has been in post. An extraordinary length of time for an MP (or Lord) to stay in government, let alone the same cabinet position. He is only beaten by Tony Blair and Gordon Brown, who have both spent nine years in their respective posts.

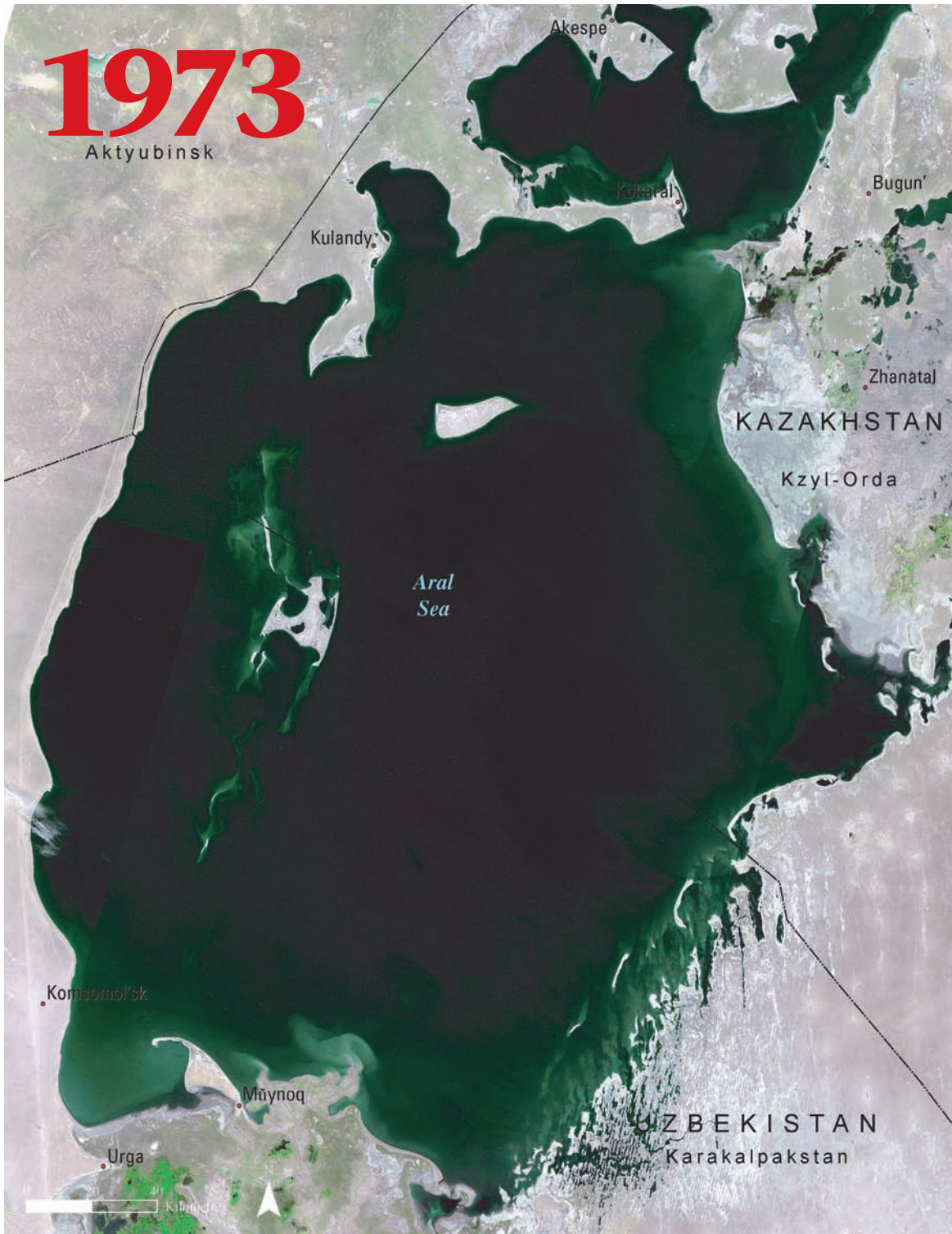
Neither would dare to reshuffle him. Since Sainsbury and Labour party got into bed in 1996 he has given the party £13-15 million, depending on his current declarations. £4 million in one form or another this year, to fill the deficit of the election campaign with science, other than in terms of “innovation” and a “knowledge economy”, with all the commercial overtones that entails, getting scant regard.

Yet his decisions will have far-reaching effects on our future. Where will international science collaboration lead? Who will it benefit? Is nanotechnology safe? What is planned for the future of GM food? Can a new generation of smart materials really resolve the problems of climate change? Are whole strands of science to be ignored because they have no palpable commercial return? These and others are all vital questions that we should be debating. But Sainsbury rarely addresses the public, preferring special interest groups.

As Mark Seddon, a member of Labour’s National Executive Committee, says, ‘In any other country I think a government minister donating such vast amounts of money and effectively buying a political party would be seen for what it is, a form of corruption of the political process.’

Sainsbury’s decisions have a direct impact on trade, education and environment. We should be worried about what he is cooking up in his office, and lab. And his refusal to seriously consider any solution to climate change and globalisation, other than steady as she goes with new materials, is a corruption of scientific principle. Objectivity lies bleeding... justification of his subjective belief has become the objective. His Nobel prize is waiting, whilst we and future generations are threatened by Sainsbury’s indulgence.

■ Jon Hughes is Deputy Editor of *The Ecologist*



GOING, GOING...

...GONE? The first in a series of shocking satellite images of our dying world



ARAL SEA, KAZAKHSTAN AND UZBEKISTAN. 1973 AND 2004.

The Aral Sea was once the world's fourth largest inland sea, the size of Ireland with a surface area of 25,521 square miles (66,100 square km). In the 1970s, the main rivers that fed it were diverted to irrigate cotton fields in arid Soviet Central Asia. By 1987, about 60 per cent of the sea's volume had been lost with a 14-metre fall in sea level. Salt concentration doubled, killing a once lucrative commercial fishing trade. Today, dust storms carry toxic sediments – fertiliser

run-off – across vast salt plains exposed by the receding waters. Life expectancies near the sea are significantly lower than in surrounding areas and cancer rates are high.

The sea is now a quarter of the size it was 50 years ago and has broken into two parts, the North Aral Sea and the South Aral Sea. Re-engineering along the Syr Darya river delta in the north will retain water in the North Aral Sea, drying the South Aral Sea completely – perhaps within 15 years.

SPLENDA AND SUCRALOSE

In our September 2005 issue, we published an article on the artificial sweetener sucralose in which we voiced our concerns about the adequacy of the regulatory approval process and our view that there remained unanswered questions about the safety of sucralose. The article raised a number of issues about sucralose and the state of scientific knowledge of its effects on humans and the environment. We invited Tate & Lyle to publish in this issue their perspective on this topic and they have accepted. An article by Rowan Adams, Director of Communications, Tate & Lyle PLC, appears below



I appreciate the opportunity to respond to the feature in the September 2005 issue of the *Ecologist*.

Sucralose is unique – the only high intensity sweetener made from sugar. It sweetens over 4,000 products worldwide, offering choice to consumers who want great-tasting food but fewer calories or who cannot use sugar for other reasons. Sucralose is safe – not just our view, but the view of every regulatory agency worldwide that has considered its safety.

Tate & Lyle firmly believes in the freedom of the press to raise matters of genuine public interest. We are not opposed to scrutiny. Nor do we seek to suppress informed criticism. Like all other organisations, we do, however, believe that criticism should be based on facts not internet fiction and that misinformation must be corrected. After all, if someone criticised you unfairly, I am sure you would want to respond.

For us the health of consumers is paramount. We see no public interest in misleading the public by deliberately misrepresenting information, which states clearly that sucralose is safe, to suggest there is a question mark hanging

over it. There is no public interest in getting basic science wrong to make an ideological point.

Let's be blunt: some people are ideologically opposed to sweeteners. They argue that sweeteners are manufactured and so must be dangerous. "Consumers don't need them," they argue. "You don't need your food to be sweetened. And why not buy our "natural" food supplements instead..."

For us this is not an ideological issue. It is a simple matter of chemistry. And this is why we have asked the *Ecologist* to let us present the scientific facts.

Conclusively tested

Critics argue that research does not demonstrate sucralose to be safe. This overlooks the facts.

Regulatory agencies, including the Food & Drugs Administration (FDA) in the US and the Food Standards Agency (FSA) in the UK, are bodies made up of scientific experts who decide whether foods are safe or not. They set very specific research requirements in accordance with Good Laboratory Practice (GLP) standards to allow them to make an informed decision. GLP regulations set out what studies are required, how these are to be performed, and how the data will be taken and preserved. Third parties have an opportunity to scrutinise, and comment upon the findings. Such studies are audited by the regulatory authorities and failure to comply carries the prospect of fines or jail terms.

If any study raises questions, and this happens regularly, then the regulatory agencies request larger, more complex studies to determine the facts. This ultimately results in the regulatory agency either approving the ingredient, because it is safe, or choosing not to approve it, because they are not satisfied that it is safe. There is no half way house and, if there is any doubt, they err on the side of caution.

When the FDA asks for further studies to obtain conclusive evidence in this way, it is its normal practice to comment in its Final Rule, the official document authorising the use of the ingredient, on both the initial study and the subsequent study that supersedes it. This means the Final Rule will always describe the issues

raised by the first study. This does not mean these issues remain unresolved, however. There would be no Final Rule if the subsequent study did not fully address the FDA's queries – they would simply not approve the product – but you can see how an unscrupulous critic could selectively quote only the section describing the first study in such a way as to create doubt in the mind of the reader when, in point of fact, the FDA was completely satisfied with the further work done.

This is precisely what some of our critics try to do with sucralose and it is both unfair and misleading – and that's why we will always challenge this kind of selective and misleading approach. We are not looking to suppress criticism, but we do insist on the facts being put forward honestly.

On sucralose, a number of studies were conducted, all in line with the requirements of regulatory agencies. In a couple of cases, as is normal, the agencies asked for further studies to be conducted to ensure they had conclusive evidence. Then they drew their conclusion: that sucralose is safe for people to eat. The FDA states in its Final Rule approving sucralose: "The Agency has evaluated all the data in the petition and other information and concludes that the proposed uses of sucralose are safe." This conclusion was based on a comprehensive assessment of the scientific facts by leading experts.

The scientific truth about chlorine

Critics usually base their concerns on the fact that it is a chlorinated substance. They argue that many dangerous substances contain chlorine so sucralose "must be dangerous."

Sucralose is a chlorinated carbohydrate. Yes, it is made with chlorine; but, no, it is not a chlorinated hydrocarbon like DDT, as critics often suggest.

It is a chemical fact that not all compounds containing chlorine are identical. DDT is dangerous to living organisms because it is a fat soluble compound and so bio-accumulates in fatty tissue. Sucralose, on the other hand, is a water soluble compound. This means that it passes through tissue freely and does not accumulate in the body. It is

the chlorine within the compound that ensures the sweetener behaves in this way, and it is a fact that 100% of the sucralose that enters the body leaves the body intact. It is entirely incorrect to suggest that sucralose is broken down for energy or enters the body's metabolic pools.

Gordon W. Gribble, Professor of Chemistry at Dartmouth College, is one of the world's leading experts on chlorine. "As with any other water soluble compound that contains strong chemical bonds, like carbon-chlorine bonds, sucralose poses no threat to human health and passes unchanged through humans. Water soluble compounds, of any type, that are unreactive, that are not metabolized, and that are otherwise unaffected biologically, cannot be toxic."

Chlorine should not automatically be presumed to be toxic, argues Professor Gribble: "Chlorine is one of the most abundant chemical elements on the planet occurring in both inorganic and organic forms. It is, in fact, naturally ubiquitous in soil, seas, minerals, plants and animals. Scientists have identified over 2,000 naturally occurring organic compounds containing chlorine, and these have an important role in biological systems and in the natural food chain. In these cases chlorine is essential for biological activity but it is the relative water solubility and the strong carbon-chlorine bond that make a compound such as sucralose resistant to metabolism."

Safe for the environment

Critics often question what happens to sucralose in the environment. They fear that because it contains chlorine, sucralose must bioaccumulate, causing pollution. Again, this is wrong.

The facts are simple: over time, sucralose will break down into water, salt and carbon dioxide. It is water soluble, so it does not accumulate in the tissue of animals or fish. There is no environmental danger whatsoever.

Answering our critics

In its article, the *Ecologist* criticised Tate & Lyle for taking steps to correct inaccurate and misleading statements by the small band of alternative nutritionists whose

gut feel is that sucralose cannot be safe.

Frankly, I am surprised that my company should be condemned for responding. After all, if someone says something that frightens people unnecessarily, which is untrue and unsupported by scientific fact, why not correct it?

The *Ecologist* asks "If sucralose is safe beyond any reasonable doubt, why is there such a fervent need to suppress any criticism of it?" Our answer is that we are ensuring the public is not misinformed.

It is a simple fact that every regulatory agency which has considered sucralose has found it to be safe. When someone says it is unsafe, based on an incorrect scientific assumption and no evidence – or by selectively quoting the record – we have no choice but to correct this misinformation. We make no apology for this. After all, what this boils down to is who do you believe – the scientific experts of regulatory agencies around the world, or a misrepresentation of the science on an unaccountable website? We will never allow information that is wrong or selectively presented to go unchallenged.

The need for sweeteners

Some of our critics believe artificial sweeteners are an unnecessary frivolity. With increasing levels of obesity, we believe artificial sweeteners have a real contribution to make in helping consumers regulate their calorie intake and in providing choice for diabetics. Sucralose is the most versatile sweetener available today, offering consumers a greater range of reduced calorie products than ever before. I am proud of sucralose's contribution on this very important issue.

Untrue and selective interpretations of science and inaccurate comment unfairly undermine the benefits of a sweetener universally declared by regulatory agencies to be safe.

BUYING SANCTUARY

When multimillionaire Doug Tompkins realised his fashion empires were part of the global economy that was killing the natural world, he sold up shop and went South to stop the destruction . . .

TEXT BY **NICOLA GRAYDON**, PHOTOGRAPHS BY **PABLO VALENZUELA**





Pumalin – ‘place of the pumas’ – stretches from the Corcovado Gulf in the South Pacific to the Andean border with Argentina, a staggering 800,000 acres of wilderness

It took two flights, two ferry trips (one lasting five hours), a long car journey on a bumpy gravel road followed by an hour in a small boat and, finally, a tractor ride to find Doug Tompkins, the multimillionaire fashion tycoon turned environmental philanthropist. Here in the spectacular hinterland of southern Chile, Tompkins, 62, founder of clothing giants North Face and Esprit, has become the custodian of an altogether different empire: Pumalin Park, the largest private nature reserve in the world.

Pumalin – ‘place of the pumas’ – stretches from the Corcovado Gulf in the South Pacific to the Andean border with Argentina, a staggering 800,000 acres of wilderness, the size of Yosemite National Park in the US. Some 70 per cent of the park is temperate rainforest that would undoubtedly have been felled by a voracious logging industry, which was encouraged to strip Chile’s native forests and replace them with alien plantations by former president General Pinochet.

Instead, last August, this pristine wilderness, with soaring volcanoes, aquamarine fjords and some of the last remaining temperate rainforest on earth, was declared a Nature Sanctuary. For



Tompkins, it marked the triumphant conclusion of a decade-long battle to create a new kind of environmental partnership with the Chilean government that will, hopefully, preserve this land in perpetuity.

Renihue, where Doug and his second wife Kris live, is so remote that, on the final leg of the journey to their home, we see seals basking on nearby rocks and pass over muddy mussel beds before arriving at a clearing in the forest and the green verges of the Tompkins' ranch. The house itself is unrecognisable from the dilapidated shell the tycoon bought 15 years ago, but still retains the simple style of the local architecture. Horses and sheep – one of which was taken by a puma during our stay – graze on the surrounding meadow.

We are greeted by the Tompkins on the porch. Doug apologises for the clouds obscuring the magnificent snowcapped Michinmahuida volcano that usually dominates the view. 'We're in a rainforest after all,' he shrugs, and immediately takes us into his office to update us on his ongoing plans for the park and surrounding area.

Meanwhile, Kris is in the kitchen rustling up breakfast: organic farmed eggs and toasted homemade bread with creamy honey. The food comes from one of eight organic farms Tompkins has developed on the fringes of the park.

High-school dropout

Tompkins has been accused of arrogance, fundamentalism, obsession and eccentricity. In person, he's softly spoken and self-effacing, but there's a stubborn intensity about him that leaves you in little doubt as to how he was able to build two transnational companies, or why he would

take on a rainforest or two to save the planet.

A high-school dropout who replaced books with mountain-climbing as a teenager, Tompkins had an early passion for nature that wasn't inherited from either his art-dealer father or interior-decorator mother. 'I've no idea where it came from. I just know I feel

best in forests, on glaciers and on the side of steep ravines.' Tompkins was often an 'absentee' boss, taking off to climb ranges around the world and sleep under the stars instead of running Esprit.

For years, he'd been looking for a way out of the corporate world, but his epiphany came after reading *Deep Ecology: Living as if the Earth Mattered*

in the mid-80s. 'It put in writing everything I'd been thinking. Arne Naess articulated the difference between 'deep' and 'shallow' ecology to identify the two currents in the environmental movement and I realised I was on the 'deep' side.

'It was also the first time I realised there were two opposing cosmo-visions of totally different values: the industrial, technological world view and the organic, ecological model.'

For the next few years, he immersed himself in books on ecology. He'd spend mornings reading and supporting environmental activist groups, and then work late into the night to catch up on his day job. 'I began to realise my business was part of the problem.'

His new convictions created 'critical ideological differences' between him and his first wife Suzie. 'She didn't understand. For her it was ridiculous, a heresy,' he says. 'She thought I'd gone off the deep end – which I had in a way: into Deep Ecology.'

He laughs rarely but, when he does, it lightens his somewhat maudlin features. In 1989, he sold his shares to his ex-wife for \$150m and set about using the money to set up two foundations: the Foundation for Deep Ecology – which has, to date, granted some \$70m dollars to environmental organisations around the world – and The Conservation Land Trust, which focuses on eco-philanthropy: buying up land to save it.

Just a rich gringo

No one took any notice of this millionaire American tycoon when he first started buying small pockets of land in Chile. It was only in 1994, when he bought 445,000 acres from a Panama holding company, that all hell broke loose.

The trouble was that he'd removed a vast tract of land from loggers and developers, and he was accused of increasingly outlandish intentions such as: tunneling under the Andes and creating a Jewish state (Tompkins is not Jewish); replacing all the cows with bison; monopolising granite. His land effectively cut the country in two, so the military weighed in with security concerns. It got nasty. Low-flying jets started buzzing the property; there was a smear campaign in the media.

Tompkins suffered the fallout for several reasons: he was rich, a gringo and, worst of all, an American. Chileans, who were just emerging from a CIA-sponsored dictatorship, were suspicious of someone like this buying up their land. Also, on arriving at Renihue, he immediately attacked the large-scale, state-subsidised salmon-farming industry that was ravaging the south coast and which, at the time, was considered one of Chile's success stories, employing as it did over 20,000 people, mostly from the impoverished south.

No one took any notice when Tompkins first started buying small pockets of land in Chile. It was only when he bought 445,000 acres from a Panama holding company, that all hell broke loose.

‘We created a lot of enemies by fighting the fisheries,’ Tompkins admits. Not least the local fish-farm manager, a former bodyguard to General Pinochet with some very powerful friends.

Tompkins’ application for Pumalin to be granted sanctuary status was immediately put on hold while politicians weighed in with their opposition.

President Eduardo Frei went on record to say that he would ‘not allow development to be curtailed by concerns for the environment’; his Minister for National Property slammed Tompkins’ project as a foreign land grab; and his Minister of Interior voiced concerns that the park could be a threat to national security as it cut the country in half.

Tompkins’ initial response was to ignore the allegations. ‘I thought that no one would listen to a bunch of bullshit that didn’t make sense,’ he says. ‘Then I realised, like anything, if you say the bullshit long enough, people start to believe what you’re saying.’

Tompkins went on the offensive: he called a press conference to counter the more malicious rumours, and did an infomercial on Chilean TV explaining his vision for Pumalin as a haven for eco-diversity and wildlife, and a place where Chileans could enjoy their natural heritage. He invited ministers, journalists and industry leaders to come and see for themselves. ‘I knew what I was doing was a good thing for Chile and that, once people knew about it, they would agree with me.’

One of those won over was Ricardo Largos, a left-leaning politician who was then the Minister for Public Works. ‘We told him we were going to create a scenic highway (one accusation was that Tompkins was going to cut off the only coast road into Patagonia) and eventually hand over the park to Chile for a national park. He became an important counterweight against the rest of the Frei government, speaking up for us at cabinet meetings.’

It was Pumalin’s good fortune that Largos became Chile’s President in 2000, the first Socialist since Allende, paving the way for a groundbreaking partnership between Tompkins’ private conservation initiatives and government policy.

Now, everyone knows Tompkins’ name and says he’s good for Chile, proving that the country can make use of their natural resources without destroying them. Others such as former presidential candidate Sebastian Pinera are following suit and buying up land to create sanctuaries.

Eco-philanthropy vs eco-activism

Pumalin was just the beginning. In 2002, Tompkins’ Conservation Land Trust gave 212,000 acres of land back to Chile for the creation of a 650,000-acre national park, encompassing 82 lakes. Meanwhile, Kris Tompkins’ own foundation





Besides Pumalin, there are 11 other conservation projects, adding up to around 800,000 hectares (just under 2,000,000 acres). Working farms with an emphasis on compatibility with biodiversity amount to about 100,000 hectares (247,100 acres) in Chile and Argentina.



Pumalin was just the beginning. In 2002, Tompkins gave 212,000 acres of land back to Chile for the creation of a 650,000-acre national park



– Conservacion Patagonica – has created the first coastal national park in Argentina and, in 2004, bought one of the largest ranches in Chile, where the huemul deer, national emblem of Chile and hovering close to extinction, may now have a hope of rebuilding herds.

The Tompkins take no credit for being conservation pioneers, pointing out that most of the great national parks in the US were created through private philanthropy – most famously, JD Rockefeller’s struggle to create the Grand Teton National Park. ‘It’s one of the things the US has actually done well; they took the first steps in the whole world to create national parks 130 years ago. Revolutionary at its time.’

But Tompkins does admit he’s at the forefront of a new, encouraging surge in ‘wildlands philanthropy’ as a way of preserving ecosystems and wildlife that has seen organisations like The Nature Conservancy and Conservation International buying up biodiversity hotspots and endangered habitats around the world.

Wildlands philanthropy, agrees Tompkins, is a fast-track way to protect threatened ecosystems, but this doesn’t mean that political activism is redundant. His Foundation for Deep Ecology has funded eclectic groups – from small grassroots organisations active in fighting globalisation to those protecting meadows and marine life – and published several books to spread awareness.

He’s adamant that political activism remains as important as conservation, although he finds himself at odds with both some of the time. ‘They tend to be divided along party lines,’ he explains. ‘The Republicans tend to be land conservationists, the Democrats are the activists. I was an activist first, a conservationist second, and I’m convinced you can accomplish more by doing both. But it’s quite controversial.’

‘I haven’t seen anything better than good old-fashioned organising methods of getting people onto the streets and putting on political pressure to get things changed. If you don’t have the right social/political framework, then eventually conservation efforts will be overwhelmed. You can’t divide these things up. Each reinforces the other, and makes it part of a holistic effort to protect both the natural environment and the human environment that depends on that. Plus you have to stand up for what you believe in.’

As he did over the local salmon-farming industry when he first arrived at Pumalin. ‘Fifteen years ago I was a lone voice,’ he recalls, grinning. ‘Now we have a strong and growing anti-aquaculture movement, with millions aware that salmon farming is a dirty business. We have the industry on the defensive and government

jumping from foot to foot not knowing what to do because now they have this whole economy built around it.

‘The debate is split into reformists and revolutionaries like me who don’t believe this is a reformable industry – it’s flawed in concept. The idea of catching fish and getting protein this way is, in common parlance, all fucked up. You’ve got to forget it.’

Garden of Eden

Pumalin is a revelation. Tiny hobbit-like cabins – made from local, reclaimed wood – at the entrance at Caleta Gonzales are the only built accommodation in the park. Nearby, a restaurant with a vaulted ceiling and a huge copper-fronted fireplace serves local, organic produce from Tompkins’ farms. Here is where you enter the land that time forgot. The silence is broken only by birds and waterfalls as you enter a rainforest reminiscent of forests in Scotland, say, or Canada – it’s benign, soft and cool, unlike its tropical cousins. Tree trunks are covered in moss, ferns and lichen. The prize is the magnificent alerce, the ‘redwood of the south’, that can grow to some 40 metres and live to over 3,000 years old. Sacred to the Incas and now protected by law, these trees have been decimated in Chile. Pumalin contains 35 per cent of the remaining alerce. One exquisite, silent grove is reached by an intricate network of wood-plank pathways, ladders, hanging bridges and hand-carved signs – all made by one carpenter working in a simple workshop in the local, dishevelled town of Chaitén.

Tompkins’ attention to detail is part of what makes this park a unique treasure. It took years to map the trails through dense forest, over streams and up to hidden waterfalls that would have been otherwise inaccessible. ‘We did it with machetes and then carried stones on our backs,’ he recalls. At times, you begin to feel as though you might be on exhibit for any resident wildlife instead of the other way round. Perfect for Tompkins’ beliefs in Deep Ecology, where humanity is just one species that needs to adjust its egocentric world-view and put nature first if we are all to survive.

Deep Ecologists are regularly accused of being misanthropic for this reason but, as Kris Tompkins points out, ‘The concern for other species makes us more human, not less’. And part of the strengths

It has taken three years to turn roughly 100 acres from a wasteland of rotting stumps, rusting machinery and defunct sawmills into a rolling meadow of grass carpeted with dandelions

of Doug Tompkins' operation is his concern with educating people on to how to live another way of life that will inflict less harm on the planet.

If he had wanted to, he could have kept Pumalin to himself and nature, but he has gone out of his way to create a five-star camping experience in the park. In the beginning, he designed every single one of the camping shelters, making sure each one faced the best view. 'We wanted to raise the bar for national parks around the world,' says Kris, and the respect is returned in kind. We didn't see even a discarded sweet wrapper on our hikes through the park.

The organic farms that encircle Pumalin are at least as important to Tompkins as his rainforest. For now, they are subsidised, but he hopes they will become self-sufficient over time. More than that, they are an example of good practice in organic farming – one of Tompkins' other passions. He is adamant that they are not 'hobby farms'.

'If we have to lose money for a while, then that's what we have to do,' he explains. 'But in the meantime, we are building topsoils, not depleting them; we are learning and we are becoming more and more self sufficient in terms of what we can produce . . . maybe it will take another 5–15 years, but the trend is in our favour. By then, I hope we will have sufficient knowledge of our farms and system to produce and sell for a profit.'

In 2000, bee stations on the farms produced 30,000 kg of honey. He has also revitalised local craftsmanship, with carpenters producing furniture and window frames from reclaimed wood, as well as the signs and camping huts for Pumalin. Kris, meanwhile, is working with local women to produce woollen products for the shop at Caleta Gonzales.

'As individuals, we have to do something that's more transcendent than just taking up space living on the planet.'

Tompkins is aware that, as he criticises salmon fishing and logging, he has to provide alternatives. He is keen to prove there is a future for Chile in low-impact eco-tourism and viable organic farming. Thus, he always employs locally to give the people of Palena a stake in his dream. Currently, the Tompkins employ 250 people throughout Chile and Argentina.

Natural designer

Tompkins' latest project is the rehabilitation of El Amarillo, a tiny hamlet of 35 homes, bisected by the Carretera Austral and abutting Tompkins' new camp-ground south of Chaitén.

In the front room of a local B&B, he is poring over plans of the village with three local women: the daughter of the establishment's owner who

happens to be a trained architect; a landscape designer; and the wife of one of his rangers who is now his field assistant.

First, they brainstorm over how to change the traffic flow and improve the houses. Over the last couple of years, Tompkins has won unanimous village approval for his plans, a major achievement given the less-than-subtle intimation that their houses are spoiling a very nice view.

'It's bringing a town back from the dead,' Tompkins declares, as we walk around the dilapidated homes and weed-strewn front gardens. 'I want them to be proud of where they live,' he says, so that, consequently, their stake in protecting the wilderness around them will increase.

And once the eye moves away from the sagging roof of the local shop, the location is extraordinary: a vast plain surrounded by soaring green peaks, a magnificent snow-covered volcano and a huge rushing river that runs through the lower part of the village taking glacial melt to the sea. 'It's about bringing harmony between man and nature,' he says, pointing out that everything will be built in the local style, using local (often recycled) materials and local labour. It's clear that he gets immense pleasure from this rural renewal project.

At Esprit, he was renowned for his obsessive attention to detail. 'Details,' he states, 'are a pain in the arse but, if you get them right, the larger picture takes shape.' He credits his father for giving him an eye, and it's true that everything he touches has a spare beauty to it – from the main office in Puerto Montt, the gateway to Patagonia, with its soaring vestibule and light-wood finish to the wooden signs that announce the travellers' arrival at Pumalin.

Next, Tompkins takes us on a tour of the restorative work at Renihue. It has taken three years to turn roughly 100 acres from a wasteland of rotting stumps, rusting machinery and defunct sawmills into a rolling meadow of grass carpeted with dandelions. It's meticulous work that he learned as he went along. Small, efficient diggers are still removing rotting logs and stumps, carefully shaking off any precious topsoil as they go. In Tompkins' world, there would be 'soil police' to ensure that the land is treated properly.

Buy, buy, buy

As we drive back to the airstrip, where his tiny plane waits next to a flock of buff-necked ibises, he tells us he'll soon be getting rid of his tractors and other machinery, and replacing them with horse-drawn vehicles. 'They're making a comeback in Europe. There are 3,500 horse-traction organisations over there,' he says. 'People think I'm mad now, but wait until oil hits \$100 a barrel



and we'll see who's laughing then.'

The designation of Pumalin as a Nature Sanctuary indicates the end of hostilities between Tompkins and his hosts. Nevertheless, he's pragmatic about the long-term future of the park: 'I have some control over the short-term future, but I can't protect it from revolutions, pollution, global climate change, acid rain. The unravelling of the ecological mosaic is impressive: from atmospheric global warming to the smaller scale where we're seeing the mass destruction of some frog species. We're not immune to that.'

He calls optimism about the ecological future of the earth as 'a fantasy hope' and admits to frequent 'waves of despair'. 'It's heavy when you look at the global context. You just hope we're going to see some unforeseen serendipitous event that's going to make some dramatic sea change in the way civilisation is going.'

Tompkins just wishes more multimillionaires would follow suit: he's been vocal about persuading neighbouring landowners – including the Benettons and Ted Turner, who both own vast ranches in Argentina – to give up ranching and practise conservation. He has also publicly mused over the huge difference it would make if Bill Gates sold up and spent his fortune on land instead of poverty or education, which he sees as diversions

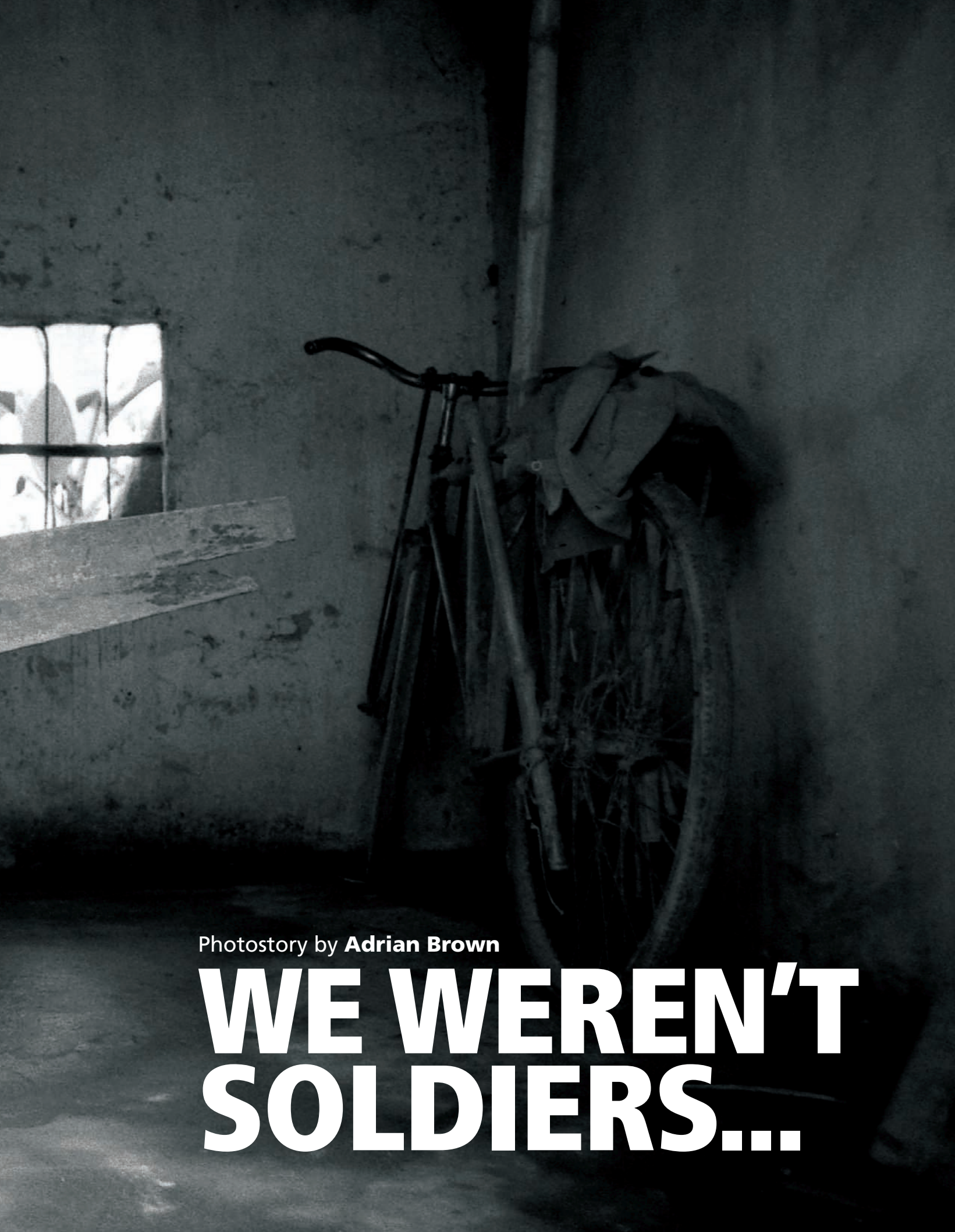
from the real work of saving the planet.

'Time is short,' he wrote in a recent essay on wildlands philanthropy. 'Extinction rates keep being revised upwards; the implications for Nature – and ultimately for human society – are downright disastrous . . . Despite the seemingly overwhelming odds, it just isn't possible to stand idly by. Wildlands philanthropists can at least see something positive for their efforts immediately – they can see a particular place, maybe a place they know and love, saved from destruction. And that, if for no other reason than our own sorrows over the extinction crisis, gives reason to feel hopeful.'

In person, he puts it more simply in a typically understated comment on his motivations: 'As individuals, we have to do something that's more transcendent than just taking up space living on the planet.' ■



Lai Van Hang, a 20-year-old woman suffering with severe birth deformities and disabilities believed caused by Agent Orange dioxin, sits in her crib in her bedroom. Thai Binh Province, Vietnam



Photostory by **Adrian Brown**

WE WEREN'T SOLDIERS...

AGENT ORANGE



Left: Two brothers, both suffering with birth deformities and disabilities believed caused by Agent Orange Dioxin, lie on a bed in their home. Thai Binh Province, Vietnam

Right: A small child with birth deformities believed caused by Agent Orange dioxin, lies in a crib at the Centre of Thai Binh Social Sponsoring, Thai Binh, Vietnam

Below: A child with severe hydroencephalitis and other birth disabilities, believed caused by Agent Orange dioxin, lies in a crib in Tu Du Hospital's Agent Orange ward, Ho Chi Minh City, Vietnam

ESTIMATED US DEFOLIANT USE IN LITRES

1962 - 65,000
1963 - 283,000
1964 - 1,066,000
1965 - 2,516,000
1966 - 9,599,000
1967 - 19,394,000
1968 - 19,264,000
1969 - 17,257,000
1970 - 2,873,000





Between 1962 and 1971, the US sprayed more than 80-85 million litres of defoliants, containing almost 375 pounds of dioxin – the most dangerous chemical known to man – over vast areas of southern Vietnam. The chemical defoliant's main purpose was to destroy Vietnam's dense tropical foliage, which served as excellent cover for the North Vietnamese Army (NVA) and Vietcong. It was also used to clear helicopter landing zones and push back concealing foliage around air bases, army posts and roads, as well as to destroy croplands potentially used by enemy forces.

Forty years on and these ecosystems and populated areas are still considered highly toxic.

Agent Orange, which accounted for approximately 60% of all defoliant used, is responsible for more than 150,000 cases of varying birth deformities in children and an estimated three million cases of other major health maladies including respiratory cancer, skin disease, heart disease and diabetes.

Unfortunately, Vietnam's financial and medical resources are not able to cope with the extremely ill and disabled who need constant daily care.

The most comprehensive study done to date on Agent Orange confirms high dioxin contamination of human blood,

breast milk, pond sediment, fish and soil. However, the US refuses to recognise any study on the effects of Agent Orange in Vietnam as definitive, and Washington's official stance on this issue has always been to dispute the limited Vietnamese research as insufficient and inconclusive. And yet in 1984, the US Federal High Court confirmed that \$180 million would be indemnified to the 15,000 war veteran claimants – with health problems considered caused by Agent Orange.

A lawsuit brought last year by The Vietnam Association for Victims of Agent Orange/Dioxin against the manufacturers of Agent Orange – including The Dow Chemical Company and Monsanto – was rejected. In April this year an appeal against that ruling will be heard by a court of appeal in New York. All involved in the international campaign are hopeful that the previous ruling will be overturned, as was that in the recent case in South Korea against the same companies.

Please support the call we are making for the United Nations to make 10th August each year an International Day for Victims of Chemical Weapons. Ask your Member of Parliament to sign EDM 605. Help the victims of Agent Orange by signing the Online Petition at www.petitiononline.com.

BEHIND THE LABEL

HOVIS WHOLEMEAL BREAD

Mix flour, water and yeast and you've got a tasty loaf of bread. But make your bread the industrial way and you'll end up eating more than you bargained for. BY PAT THOMAS

INGREDIENTS

Wholemeal flour, water, brown sugar, yeast, salt, wheat protein, malt flour, vinegar, emulsifiers: E481, E472(e); fermented wheat flour, vegetable fat, soya flour, flour treatment agent: E300

It's the ultimate fast food, convenient and healthy and with genuine traditional appeal. Bread is one of the great staple foods and, made properly from good-quality ingredients, it contains numerous vital nutrients – fibre, protein, carbohydrates, vitamins, minerals and essential fats – that our bodies need to stay healthy.

In the UK we spend £1.2 billion on pre-sliced, pre-packaged bread each year and 75 per cent of these purchases are made in supermarkets. Hovis is our favourite brand and rakes in 23 per cent of the UK bread market. With nearly 100 per cent of UK households buying bread, it would seem that the bakery business is the one to be in, but market trends show

that sales of traditional loaves are sagging as more and more of us experiment with novelty breads such as naan and Mediterranean flat breads.

The reason, say some observers, is that the traditional loaf just isn't what it used to be. And the reason for this is that affluent countries such as Britain and the US have let bread standards slide badly, abandoning the age-old craft method of bread making in favour of speedy industrial solutions that produce soft, uniform, tasteless loaves suitable only as a vehicle for carrying sandwich fillings.

Wholemeal bread is flour, water and yeast. But look at the ingredients for industrial bread and you will find extra ingredients that hold the bread together, stop it going mouldy, and enable it to hold more water. Indeed water is a major ingredient of most supermarket breads. One investigation of factory bread in 1978 found the water content had risen from 36 to 40 per cent. A subsequent investigation in 1986 found it had risen again to 45 per cent.

The other problem is the way bread is made. Traditional bakers kneaded the dough and then leave it to prove (rise) before baking.

In contrast, most industrial bread is made using a modern commercial process known as the Chorleywood Bread Process (CBP). This is a high speed, corner-cutting method that employs a vast amount of yeast to raise the dough quickly, puffs it up with lots of water and air, plus hard fat to hold it up, and includes extra salt to compensate for the lack of flavour.

The Chorleywood method is fast, cheap and, since it gives much higher yields of bread from each sack of flour, profitable. It produces a loaf with a long shelf life but without any of the traditional texture, taste or quality of carefully made bread.

Conventional loaves also have other problems. According to research published in July 2005 by the UK's Pesticides Residues Committee (PRC), wholemeal bread contains more pesticide residues than any other type. The report revealed that residues of chlormequat (a plant growth regulator used on various crops, including cereals), glyphosate (used as a desiccant on cereal crops), malathion (an insecticide) and pirimiphos-methyl (an insecticide used to control pests of stored grain), were detected in 53 of the 72 'ordinary breads' tested. According to the PRC, none of the residues detected exceeded the maximum residue level (MRL), the legal limit of residue permitted. But surely, and especially with such a staple food, we have a right to expect no contamination at all.



| INGREDIENTS | PURPOSE | ADVERSE EFFECTS |
|---|---|--|
| Wholemeal Flour | Base ingredient | Made from the whole wheatgrain, wholemeal flour retains many important nutrients. But, because of the way wheat is grown and stored, non-organic flours can contain harmful pesticide residues. The latest UK research found chlormequat, glyphosate, pirimiphos-methyl and malathion (a potential carcinogen and endocrine disrupter) were highest in samples of wholemeal bread. |
| Yeast | Raising agent, flavouring agent | Industrial processing uses two or three times the usual amount of yeast compared to craft bread. This large increase in the amount of yeast we consume in our bread is one possible reason for the growth of yeast intolerance, irritable bowel syndrome and thrush (candidiasis/Candida albicans) disorders over the past few decades. Symptoms of yeast intolerance include itching, rash and other allergy-like problems. |
| Vegetable oil | Fats act as binders and improve the 'mouth feel' of foods | The description is too vague to be helpful. Most vegetable oils in processed foods are based on corn or sunflower oil high in omega 6 fatty acids. Over-consumption of omega 6 is linked to cancer, immune system damage, hormone imbalance, heart disease and stroke. |
| Salt | Flavour enhancer | Industrially produced bread is a high salt food. To give you an idea of quantities, according to the Food Standards Agency (FSA), 0.5g sodium (1.25 g salt)/100g is a lot of salt and 0.1g sodium (0.25 g salt)/100g is a little. High intake of salt can cause high blood pressure – a major risk factor for coronary heart disease and stroke. |
| Wheat Protein | Conditioner | Wheat protein (gluten) is added to bread dough to obtain a better rise/strength/chewiness. Intolerance to gluten is increasingly common. Baking does not appear to destroy the allergenic potential of wheat proteins. More worryingly, animal studies indicate that wheat proteins also appear to increase the risk of diabetes. |
| Soya Flour | Increases protein content | The manufacturers of Hovis say there are no GM ingredients in their products. Nevertheless soya is a cheap and overused form of protein in modern baked goods. It is also an estrogen mimic that can disrupt hormone levels in men and women. Excess consumption of soya isoflavones (plant estrogen) is also implicated in thyroid and immune system suppression, increased risk of estrogen dependent cancers, infertility and growth problems. It can interfere with absorption of important nutrients. |
| E481 | Emulsifier, stabiliser | Also known as Sodium stearoyl-2-lactylate. Vegetarians beware – can be of animal origin. Also functions as a plasticiser, surfactant and is just as likely to be found in face cream and body lotions as in bread and other bakery products. |
| E472e | Emulsifier | Also known as Mono- and diacetyl tartaric acid esters of mono- and diglycerides of fatty acids. Fatty acid esters are commonly used in junk foods to keep them from getting stale. Often derived from GM soya bean oil. |
| <i>NOTE: Space restrictions prohibit full referencing; however, Behind the Label draws on data from published studies and reports in medical, scientific and trade journals, government-sponsored databases (e.g. the US National Library of Medicine) and relevant Material Safety Data Sheets (MSDS).</i> | | |

ALTERNATIVES

Artisan and craft bakers are making a comeback as people long for bread that has flavour, texture and a high satisfaction quota. Research suggests that there are about 3,000 individual craft bakers still in the UK. Support them by buying online, by mail order or looking for them at farmers markets – and give yourself a treat in the process.

Artisan Bread
www.artisanbread.ltd.uk
The Authentic Bread Company
www.authenticbread.co.uk
The Village Bakery Melmerby
www.village-bakery.com

Flour Power City Bakery
www.flourpowercity.com
Hobbs House Bakery
www.hobbshousebakery.co.uk

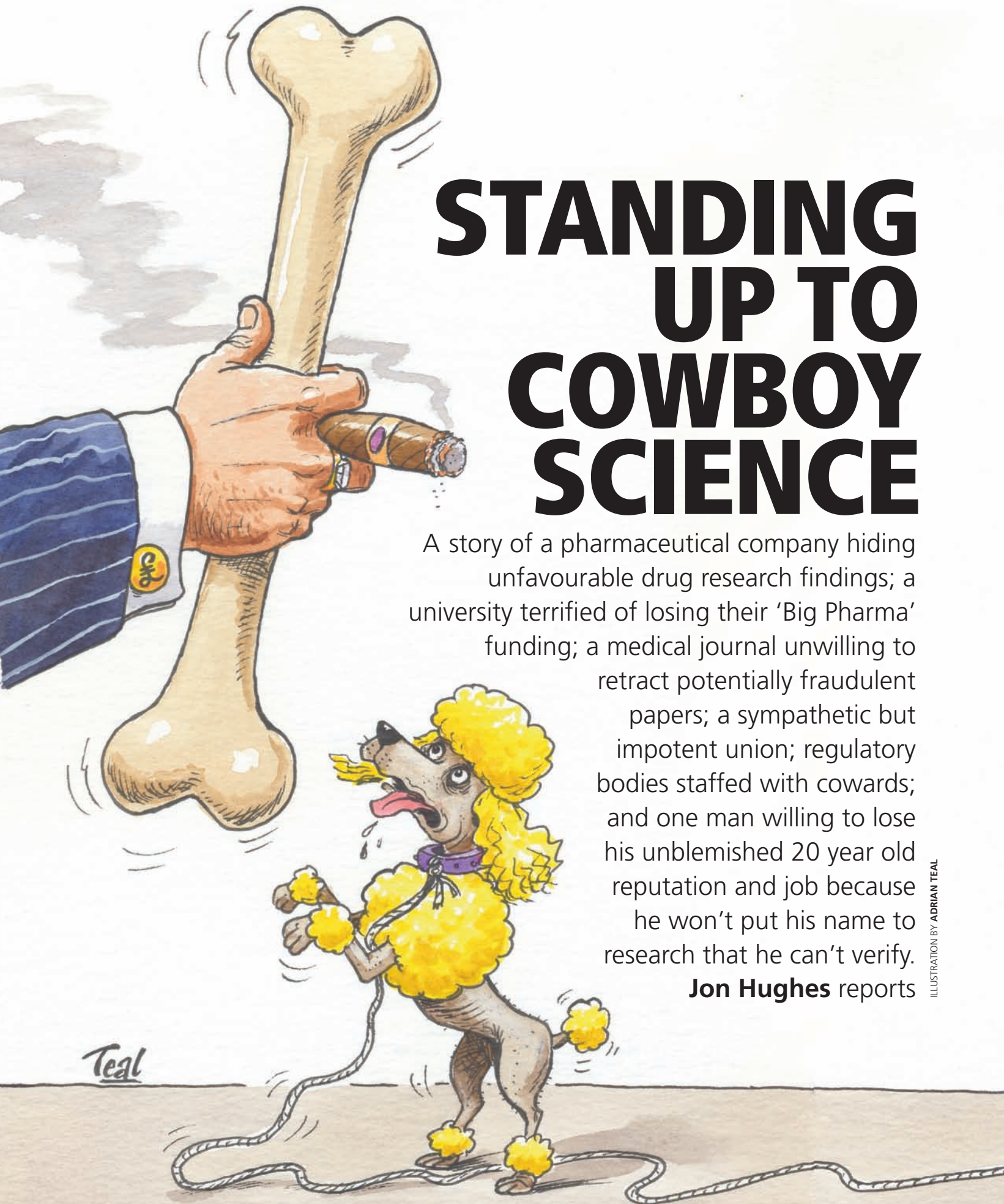


STANDING UP TO COWBOY SCIENCE

A story of a pharmaceutical company hiding unfavourable drug research findings; a university terrified of losing their 'Big Pharma' funding; a medical journal unwilling to retract potentially fraudulent papers; a sympathetic but impotent union; regulatory bodies staffed with cowards; and one man willing to lose his unblemished 20 year old reputation and job because he won't put his name to research that he can't verify.

Jon Hughes reports

ILLUSTRATION BY ADRIAN TEAL



Aubrey Blumsohn is a South African with a lifelong love of science. Give him a proposition and he'll weigh up the evidence. He is precise, inquisitive, methodical. A medical doctor, pathologist and consultant in metabolic bone disease the father of two has a keen interest in statistics and his thorough approach to research is well-regarded by his peers internationally. For most of the past 20 years he has worked at the medical school of Sheffield University, which has a long-standing reputation for research excellence – it has five star government rating – and is among the world's elite institutions in the study of bone. Blumsohn wrote his PhD here before becoming a senior lecturer.

It was in this role that Blumsohn was asked in 2002 to undertake the final and conclusive phase of a study into the treatment of osteoporosis begun by his department head Professor Richard Eastell two years earlier.

Eastell had been working with Proctor and Gamble Pharmaceuticals (P&G) to prove that the company's osteoporosis drug Actonel was as good as the market-leading osteoporosis drug Fosamax. While Actonel is already P&G's first billion-dollar drug, it is considered less effective than Fosamax. With the worldwide market for such osteoporosis drugs worth around \$6 billion annually, P&G wanted to put itself in pole position before the patents on Fosamax expire in 2008 and the protected brands have to compete with the generics.

In the words of the company the intention was to induce a 'paradigm shift' in the way these drugs are understood to operate and used as part of a marketing strategy to get more doctors to use Actonel. Both Actonel and Fosamax claim to reduce fracture risk by reducing 'bone turnover', the process by which bone continually replenishes itself, gradually losing mineral content, making it brittle.

If the larger study group resulting from Blumsohn's study confirmed Eastell's findings that the benefit of decreased bone turnover 'plateaued' at around 35-40 per cent, then the additional reduction seen with Fosamax would be irrelevant.

WORK BEGINS...

In the summer of 2002 Blumsohn began work testing urine and blood samples from 3,000 people,

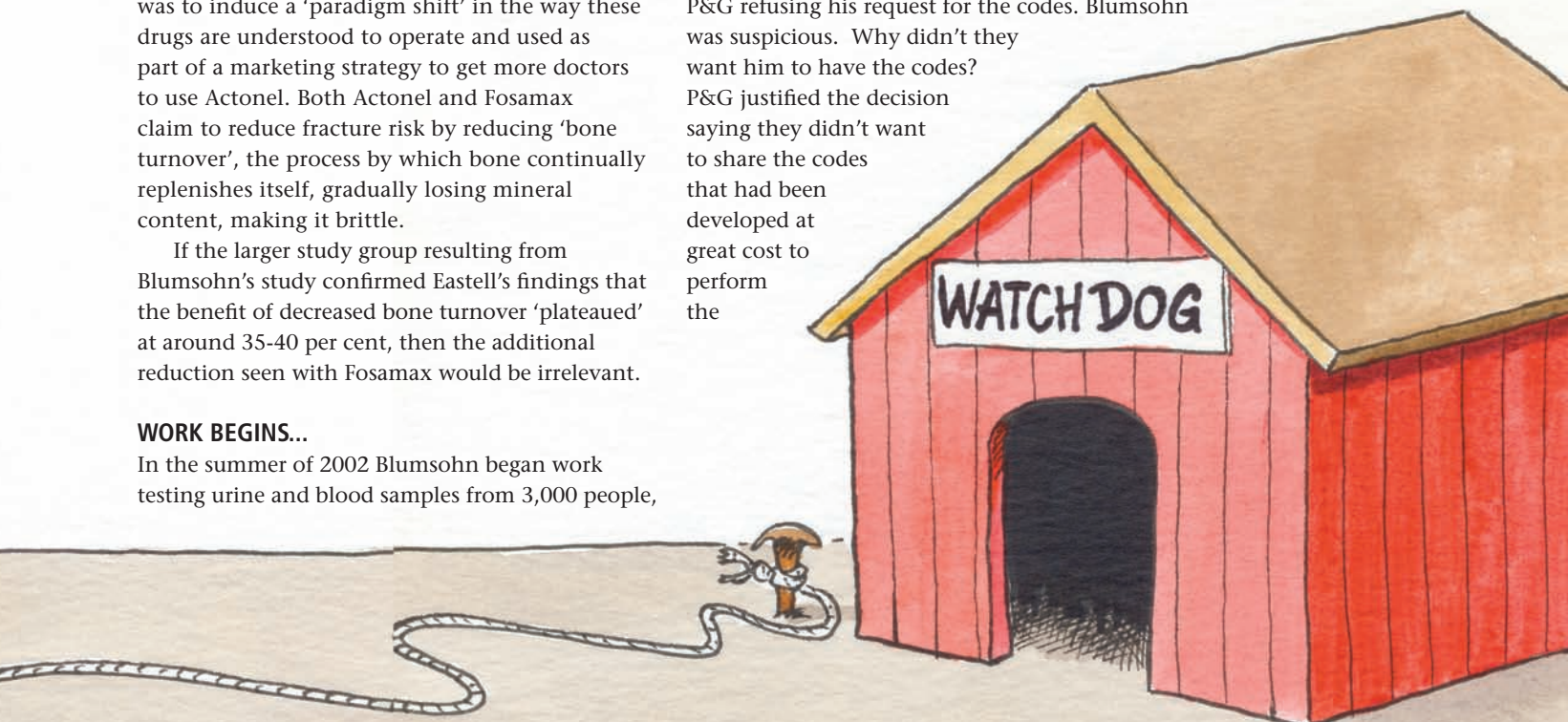
some on Actonel, and some on a placebo, provided by P&G. At this stage in any drug trial, tests are performed as 'blind studies', to ensure no one can skew the findings. For this reason samples are supplied with randomized codes, to prevent the tester from knowing who was allocated which treatment. Without the codes, the results are just a meaningless list of numbers.

Then Blumsohn started to hear noises off. Apparently, at two international conferences Eastell had been challenged on the results of the preliminary P&G studies. Embarrassingly he was unable to answer in detail and was forced to admit that all the analyses had been done by P&G employees and not by himself. Blumsohn was shocked. He had never encountered a situation where a scientist had validated and presented work on hearsay alone.

Blumsohn sought assurances from Eastell that this was an aberration and that all the data from the study and codes would be made available to him. Eastell duly wrote to P&G's UK statistician, Dr Ian Barton, requesting Blumsohn be allowed to see all the results and have access to the codes, adding that it would protect himself against further challenges about the preliminary results. Meanwhile, Blumsohn returned to his lab to continue measuring bone turnover in the 'blind study'.

In late June 2002 he received an email from P&G refusing his request for the codes. Blumsohn was suspicious. Why didn't they want him to have the codes? P&G justified the decision saying they didn't want to share the codes that had been developed at great cost to perform the

Any trust Blumsohn had in the study evaporated. He was now certain P&G was misreporting the findings for financial gain



analysis with a third party and that training Blumsohn to use it would delay 'time to result'. Blumsohn was dumbfounded. In that case he was being asked to rubber stamp results without knowing whether the evidence justified them.

The paper made no mention or declaration of relevant conflicts of interest and yet Blumsohn knew that at least one of the named authors received substantial salary funding from P&G.

That August Blumsohn pressed the issue with Eastell. He told him of his unease and was astonished to be told of the need to be careful because, 'P&G would withdraw their funding from our group'. P&G was not only paying \$250,000 for the research Blumsohn was undertaking, the company sponsored the P&G research centre at Sheffield University, believed to be to the tune of £1m annually, and paid the salaries of several staff members. Presuming Eastell to be addressing the realpolitik of the situation, an uneasy compromise was reached. They agreed that the results of Blumsohn's lab tests would be analysed by P&G staff. In return the method of analysis would be given to Blumsohn so he could independently analyse the conclusions arrived at by P&G.

However, what turned up from P&G that autumn looked more like a business plan. It mentioned a 'business purpose' and 'brand tactic' which was stated to be 'osteoporosis paradigm shift'.

In other words,

reducing bone turnover by more than the 35-40 per cent 'plateau' had no beneficial impact on reducing the fracture risk in osteoporosis patients. Ergo: the greater effect of Merck's Fosomax was irrelevant. There was no further explanation or analysis of how the final figures were to be arrived at.

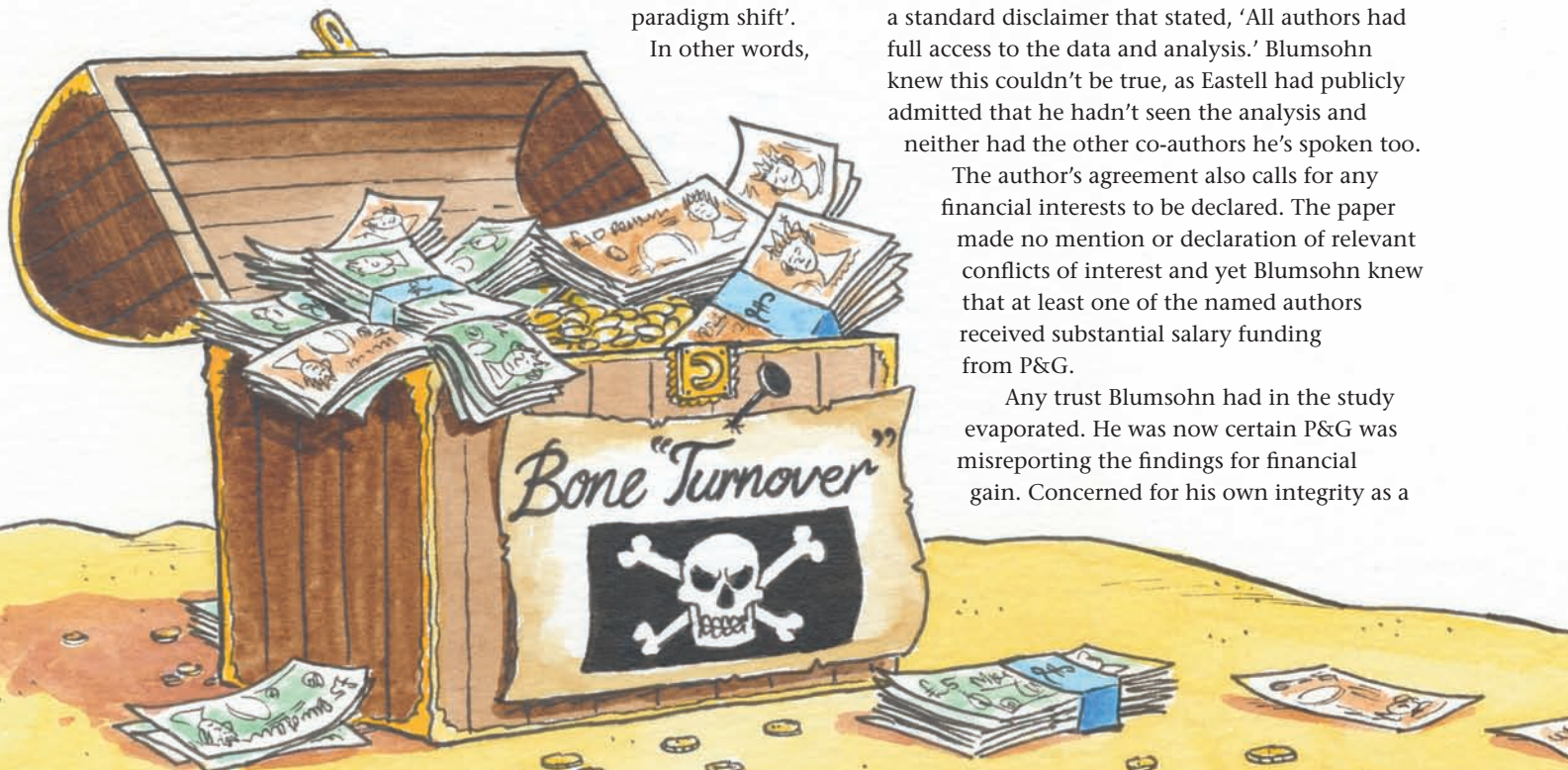
In December 2002, Blumsohn delivered the final results from his laboratory study to P&G and again asked for the codes. None were sent. Instead, in February 2003, Blumsohn received an analysis prepared by John Banner, P&G statistician in America, which made no sense to him. He continued to press for the codes. P&G filibustered. Blumsohn told Eastell that he was concerned by P&G's 'non-transparent' approach.

Meanwhile, Barton sent an email containing the final P&G analysis of Blumsohn's study. It was entitled, 'This is what the medical community has been asking for', and in the body of the text said, 'I truly believe that these data are so important... this fits nicely with our hypothesis.' P&G were eager to start publishing the findings. Blumsohn's lab results were released as headline findings that April to the annual conference of the American Society for Bone and Mineral Research and an intense timetable for publication was drawn up. Blumsohn remained in the dark.

That June the distinguished *Journal of Bone And Mineral Research* published a paper by Eastell, in which he outlined the 'plateau effect'. Blumsohn was stunned, not by the claims, which he couldn't dispute either way, but because the paper carried a standard disclaimer that stated, 'All authors had full access to the data and analysis.' Blumsohn knew this couldn't be true, as Eastell had publicly admitted that he hadn't seen the analysis and neither had the other co-authors he's spoken too.

The author's agreement also calls for any financial interests to be declared. The paper made no mention or declaration of relevant conflicts of interest and yet Blumsohn knew that at least one of the named authors received substantial salary funding from P&G.

Any trust Blumsohn had in the study evaporated. He was now certain P&G was misreporting the findings for financial gain. Concerned for his own integrity as a



scientist and to ensure he wouldn't be personally implicated, he started to covertly record his meetings with Eastell and P&G. Once more he approached Eastell concerned that they would be accused of 'scientific fraud'.

Knowing it would be disastrous to alienate the intended lead author in this critical study, P&G tried to appease Blumsohn and address his concerns. The company still refused to release the codes but they invited him to P&G HQ in Egham, Surrey, to look at the results in more detail in the presence of Dr Ian Barton.

Blumsohn's suspicions about P&G's analysis were confirmed at this July meeting. In the absence of being given the actual data, Blumsohn asked Barton to run some computer-generated data through the statistical computer programme used to analyse the osteoporosis study. The results were, in Blumsohn's view, perverse, showing impossible outcomes, which did not fit with the simulated data. They pressed on.

Blumsohn then asked why the published papers from P&G included graphs with an axis running from -62% to 0%, which he observed meant a substantial proportion of the data would have 'fallen off'. He asked Barton to show him the plots of the figures that had generated these final graphs. He was astonished by what he saw. There was no evidence of a 'plateau effect' in a subset of the data for which P&G had published that there was. In fact, the data appeared to indicate the opposite; the more bone turnover reduced the fewer fractures there appeared to be. In the group of patients with the biggest decrease in bone turnover there were no fractures at all.

Blumsohn was outraged. It could mean only one thing: the published figures had been manipulated and misrepresented. He'd seen enough and left.

He returned to Sheffield and immediately emailed Eastell, alerting him to the fact that the data had been perverted, but he got no response. Feeling increasingly isolated and compromised, Blumsohn sought support elsewhere. He contacted the university's harassment counsellors to alert them to the looming crisis and potential fallout. He also contacted his trade union, the Association of University Teachers (AUT), to find out how he should proceed. While he received good personal

support at a local level from the university's AUT rep, the union leaders chose to ignore his appeal to confront the issue of legitimate academic freedom being compromised. Indeed, they suggested if he wanted to raise the issue he should seek support by raising a motion at a local level and take it from there.

In early September Eastell, Barton and Blumsohn met to discuss the 'difficulty'. They all recognised the gravity of the situation and the potential to damage their own reputations and that of the university. The meeting broke up with views aired but little agreed, certainly not to Blumsohn's satisfaction.

The following day Blumsohn met with Eastell to discuss the outcome of the meeting and was astonished that Eastell offered no support. Rather Eastell spelt out his concerns that the relationship with P&G 'would be disturbed' if Blumsohn kept pressing for the codes, adding that 'we need the money', with implicit consequences for Blumsohn's colleagues. Blumsohn was emphatic in response: no codes, no way was he going to put his name to the published research.

P&G's solution? Simple, remove the problematic data from the analysis in the draft publications in order to show P&G's required 'plateau effect'. Blumsohn couldn't believe what was happening.

On May 24 and 26 2004, Blumsohn sent, by email and post, an official letter of complaint to Eastell, who was also responsible for research ethics in his capacity as Research Dean of Sheffield Medical School. Blumsohn said every step must be taken to stop this 'contamination of the science record' and that he couldn't reconcile the current situation with his personal values and statutory responsibilities. Nothing happened for a week.

On June 2 Blumsohn received a reply which studiously ignored the concerns he had raised. Blumsohn forwarded his concerns about denial of access to data and his fear that 'fraud' was taking place to the Dean of the Medical School, Professor

Rather than setting an example and protecting the public from rogue research the regulators are positively encouraging it through their approach to science

Weetman, and University vice chancellor, Professor Bob Boucher. Receipt was acknowledged and the complaint was forwarded to human resources. There the matter seem to be shelved. Blumsohn followed up his initial complaint with several letters to the Weetman and Boucher asking how it were possible that a research dean (Eastell) had not acted upon such a problem were ignored.

In December 2004 P&G lost patience with Blumsohn's perceived intransigence and he was implicitly told in a letter from Eastell that he either got back on side or his name would be removed from the papers being prepared for publication. Eastell also told Blumsohn his demand to see the raw data was unusual and not in line with standard procedure. That spelt the end of the relationship for Blumsohn.

Having had his concerns repeatedly ignored by Eastell, in May 2005 he appointed solicitors to request the data and codes on his behalf from both Eastell and P&G vice president of research and development Larry Games. In general, failure to supply such data would be considered strongly suspicious of fraud. Blumsohn knew Eastell wouldn't be able to supply it. This was confirmed when Eastell's lawyers said Professor Eastell had himself asked for the data and his request had

been refused.

Blumsohn alerted John A Eisman, editor in chief of the *Journal of Bone and Mineral Research*, that he had printed a paper under false pretences, that the author's declarations were incorrect, that there were commercial conflicts of interest and that investigators had been deprived of access to all the data. Blumsohn sat back and waited. As far as he could see this was the end game. Either P&G released all the data and codes and allowed him to complete his research or Eisman would have to withdraw the papers he had published exposing P&G to allegations of fraud. But nothing happened. His solicitors received no reply from P&G and Blumshon received no response from Eisman despite numerous attempts to get through to him.

Blumsohn tried to alert the Medicines and Healthcare Regulatory Authority (MHRA), who license drugs in the UK to this potential misrepresentation of research data, but found himself being passed from department to department and was at one point told 'we don't have much experience of dealing in this area.' The MHRA had in the meanwhile itself been subjected to heavy criticism from the Commons Health Select Committee for having severe conflicts of interest, and failing to secure or examine raw data in drug licencing applications. What's more the MHRA declined to accept evidence from Blumsohn and later even threatened to charge him money to review the evidence he did send.

Blumsohn was exasperated. He had done everything in his power to have this matter resolved. He had alerted the university authorities at every turn over three years, his union, the *Journal of Bone and Mineral Research* and the industry watchdogs. Blumsohn despaired. These were all parties that had a vested interest in upholding the integrity of scientific research. If they aren't interested then the implications for science are bleak. Determined not to allow events to end there Blumsohn notified the University authorities of his intention to go public and went ahead, detailing the case to the BBC and the *Lancet*. On September 9 2005 Blumsohn was suspended on full pay for bringing the university into disrepute, something he had been actively trying to prevent.

That same day he received a reply to his solicitor's letter from P&G. It said Blumsohn had had the data and had been given an opportunity to analyse it on his laptop before returning it to the company. It didn't address the 18 explicit requests Blumsohn made for the data, nor the explicit refusals he received.

For six months Blumsohn remained at home,

NOT AN ISOLATED CASE

Dr Aubrey Blumsohn is just one of many doctors who have found themselves caught up in the murky world of corporate sponsored university research. Not all act as whistle blowers, and those who do often find their reputations attacked, their departments closed and their livelihood threatened.

Other recent and highly public cases include:

1996 Dr Betty Dong, working for the University of California San Francisco (UCSF), had been involved in a study of Synthroid, a drug produced by Boots Co. When she found that the drug was not as effective as the company claimed, Boots stopped her from publishing her results.

1997 David Kern, a professor of Occupational Medicine at Brown University, was hired to look into the illness of two workers at a textile plant. His diagnosis was that they were suffering from a new disease, 'Flock workers lung'. He attempted to publish this information, but was threatened due to a non-disclosure agreement he had signed. He continued to publish and was fired, and his unit disbanded.

1998 Nancy Olivieri, the Toronto-based scientist, broke a confidentiality agreement with the pharmaceutical company Apotex and published research concerning the level of toxicity of its drug Deferiprone for children suffering from thalassaemia. The Hospital for Sick Children, part of Toronto University tried, but failed, to sack her. Olivieri maintains she has been subjected to a continuing series of public criticisms attempting to discredit her – by the hospital and by Apotex.

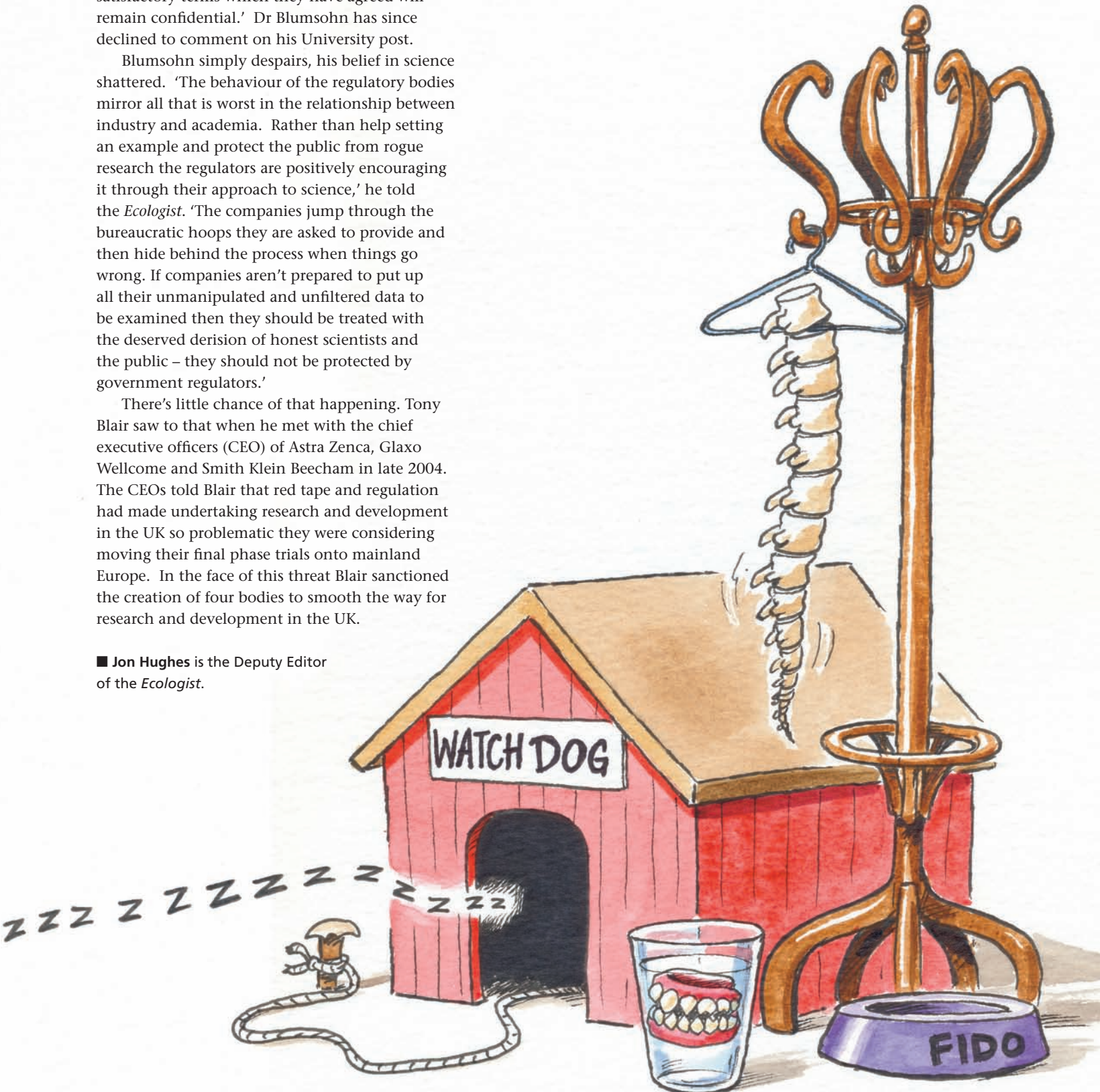
2000 Dr David Healy is a British psychiatrist who was offered a high-ranking position at the Center for Addiction and Mental Health (CAMH) in Toronto. However, following a speech in which he suggested that Prozac can drive people to suicide – even if they aren't depressed, the job offer was very publicly withdrawn.

his 20 year long career on hold. On 31st March this year he reached a settlement with Sheffield University and left his academic post. An agreed statement read: 'Dr Blumsohn and the University of Sheffield are pleased to announce that they have compromised their differences upon mutually satisfactory terms which they have agreed will remain confidential.' Dr Blumsohn has since declined to comment on his University post.

Blumsohn simply despairs, his belief in science shattered. 'The behaviour of the regulatory bodies mirror all that is worst in the relationship between industry and academia. Rather than help setting an example and protect the public from rogue research the regulators are positively encouraging it through their approach to science,' he told the *Ecologist*. 'The companies jump through the bureaucratic hoops they are asked to provide and then hide behind the process when things go wrong. If companies aren't prepared to put up all their unmanipulated and unfiltered data to be examined then they should be treated with the deserved derision of honest scientists and the public – they should not be protected by government regulators.'

There's little chance of that happening. Tony Blair saw to that when he met with the chief executive officers (CEO) of Astra Zenca, Glaxo Wellcome and Smith Klein Beecham in late 2004. The CEOs told Blair that red tape and regulation had made undertaking research and development in the UK so problematic they were considering moving their final phase trials onto mainland Europe. In the face of this threat Blair sanctioned the creation of four bodies to smooth the way for research and development in the UK.

■ **Jon Hughes** is the Deputy Editor of the *Ecologist*.





DARING RESCUE OF A HUMPBACK WHALE

A humpback whale freed by divers from a tangle of crab trap lines near the Farallon Islands nudged its rescuers and flapped around in what marine experts said was a rare and remarkable encounter.

"It felt to me like it was thanking us, knowing that it was free and that we had helped it," said James Moskito, one of the rescue divers. "It stopped about a foot away from me, pushed me around a little bit and had some fun."

The 45-50ft female humpback, estimated to weigh 50 tons, was on the humpbacks' usual migratory route between the Northern California coast and Baja California when it became entangled in the nylon ropes that link crab pots.

It was spotted by a crab fisherman at 8:30am in the open water east of the Farallones, about 18 miles off the coast of San Francisco.

By 2:30pm, the rescuers had reached the whale and evaluated the situation. Team members realised the only way to save the endangered leviathan was to dive into the water and cut the ropes.

It was a very risky manoeuvre, Stoudt said, because the mere flip of a humpback's massive tail can kill a man.

"I was the first diver in the water, and my heart sank when I saw all the lines wrapped around it," said Moskito, who works with Great White Adventures, a cage-diving outfit. "I really didn't think we were going to be able to save it."

Moskito said about 20 crab pot ropes, which are 240 feet long with weights every 60 feet, were wrapped around the animal. Rope was wrapped at least four times around its tail, back and left front flipper, and there was a line in its mouth.

The crab pot lines were cinched so tight, Moskito said, that the rope was digging into the animal's blubber and leaving visible cuts. The combined weight was pulling the whale downward, forcing it to struggle mightily to keep its blowhole out of the water.

Moskito and three other divers spent about an hour cutting the ropes with a special curved knife. The whale floated passively in the water the whole time, he said, giving off a strange kind of vibration.

"When I was cutting the line going through its mouth, its eye was winking at me, watching me," Moskito said. "It was an epic moment of my life."

When the whale realised it was free, it began swimming around in circles, say the rescuers. Moskito said it swam to each diver, nuzzled him and then swam to the next one.

"It seemed kind of affectionate, like a dog that's happy to see you," Moskito said. "I never felt threatened. It was an amazing, unbelievable experience."

"You hate to anthropomorphise too much, but the whale was doing little dives and the guys were rubbing shoulders with it," Menigoz said. "I don't know for sure what it was thinking, but it's something I will always remember."



The TESCO Chain Store Massacre

How one small town took a stand against a retail giant – and won BY PAUL KINGSNORTH

This is the second time that Ronald Wright has shown me his selection of nails. He's evidently proud of them. We're in the back room of Ron's ironmongers' shop, which takes pride of place by virtue of its longevity in the thriving high street of Sheringham on the North Norfolk coast. Seventy-five-year-old Ron has worked here for 60 of those years, as did his father and grandfather before him, and as his two sons do now. Blythe and Wright, founded in 1897, is truly a family firm.

Out front, it's a busy Saturday afternoon. The sun is shining, and the shop is full of men buying paintbrushes, wheelbarrows, drill bits and dowelling. The staff bustles past, helping customers with their needs and advising them on how best to approach the task ahead. Ron tells me to pour myself a cuppa from the huge brown teapot that sits on top of a filing cabinet. Small, white-haired

and immaculately dressed in a shirt and tie, brown shoes, and a blue Blythe and Wright overcoat, Ron is proud of what he has built up. In his rolling Norfolk accent, he tells me why.

'We're one of the last ironmongers in England,' he says. 'It's all B&Q now, isn't it? But look at this. Look at this range.' He indicates the back wall, which is lined with dozens of trays of nails, in every size, shape and quantity imaginable. He sweeps his hand along it proudly, and looks at me intently through his gold-rimmed glasses.

'Now,' he says, 'you won't find this in B&Q. You won't find this range, and you won't find them sold individually either. In there, it's all little plastic packets, and you get what you're given. Here, we give the customer what they want – one nail or one hundred. We've got them all, and we know what we're talking about. You don't see this anymore, do you? Well, you still see it here.'

'Ironmongers' is actually a bit of a misnomer when it comes to Blythe and Wright. The word conjures up images of dusty Dickensian boltholes hung with odd contraptions and cobwebs – something from another century. Blythe and Wright is anything but. This is a big, well-stocked modern shop, selling everything and anything that the hardware enthusiast, DIY-er or gardener could possibly want. It's popular, well-run and customer-friendly. Personal service, says Ron, is their speciality.

'It's old family firms like this that built England,' he declares, proudly. 'Sheringham may be a small town, but it's a special one. Did you know that we're the only town of six or seven thousand people in England that doesn't straddle a main road? Sheringham wasn't developed, you see; it evolved. We're a bit unique and, being unique, we don't want it spoilt by Tesco.'

Tesco – the name that sends a shudder

down the spines of small shopkeepers and independent businesspeople from Truro to Inverness – has, for the past few years, been haunting the dreams of the people of Sheringham. For this small town, huddled on the flat East Anglian coast, is indeed, in Ron's words, 'a bit unique': it is one of the last towns in Britain without a supermarket.

As a result, it has a thriving mass of individual, independent local shops. A walk down its high street is a rare treat, and the character it reveals is a rare thing also. For Sheringham is a town which retains what so many of our towns have lost: independence of character, individuality of outlook, a spirit of its own.

Naturally, then, it seems the ideal place for a vast new Tesco superstore.

That, at least, is the supermarket's view. Britain's fastest-growing and most successful superstore has already captured over 30 per cent of the grocery market in Britain. This year, it plans to open over 100 new branches, taking it above 2000 stores for the first time. One in every eight pounds spent on Britain's high streets is spent in Tesco, and the company is expanding rapidly abroad: it now has branches in China, Korea, Poland, Hungary, Thailand, Slovakia, Turkey and Taiwan, and is rumoured to be planning entry into the US market.

But this, apparently, is not enough for Tesco. No corner of the market must be allowed to go untapped. Almost a decade ago, the company identified Sheringham, with its rich local economy and lack of other large competitors, as prime territory. For seven years, it engaged in secret negotiations with town, district and county councils to ensure that it got exactly what it wanted. In cahoots with local councillors, the company redrew

Sheringham wasn't developed, you see; it evolved. We're a bit unique and, being unique, we don't want it spoilt by Tesco.'



...it's happening!

TESCO

the map of Sheringham to accommodate its plans. Only after it had got what it wanted from the council did the company apply for planning permission. And only after that did the people of Sheringham find out what was about to hit them.

When they did find out, there was consternation. To the horror of local shopkeepers, many local residents and even a number of the tourists who flock to this little seaside town every summer, it was revealed that part of the historic town centre was to be demolished to make way for the new store and car park.

Sheringham's fire station and community centre, an old-people's home and a row of historic Norfolk flint cottages were to make way for a town-centre superstore serving 38,000 people, in a town with a population numbering less than 8,000. The intention seemed clear: Tesco planned to Hoover up the grocery trade not just in Sheringham itself, but in the whole of North Norfolk.

What this would have meant for the rich diversity of Sheringham's high street was evident to those whose living depended on it. One of them is Mike Crowe, whose shop, Crowe's of Sheringham, is just a few doors away from Blythe and Wright. Crowe's is a curiosity shop crammed with random knick-knacks: brass pokers and bedpans, baskets of signs that say things like 'Hands off the barmaid', plaster ducks, old kettles, lamps, boxes of second-hand cassette players, a bucket of golfballs. Everything is individually priced with a little handwritten sticker.

Mike Crowe has piercing blue eyes and a face reddened by the sea wind. He's been in Sheringham for 63 years, and has run this shop for 30 of them. He is also chairman of Sheringham Regeneration, a local group dedicated to improving the quality of life in the town. The ironic thing, he says, is that the people of Sheringham would actually like a new food shop. They can see a need for one – but not this one.

'I think the problem with these big stores is that they're not really interested in the individual, or in anything different,' he says thoughtfully, leaning on his scuffed wooden shop-counter. 'If Tesco came to Sheringham and said to us 'What do you want?', I think the town



PHOTOGRAPHS BY GUARDIAN NEWSPAPERS LTD 2004

would be almost unanimous. Ask anyone, and we'll all say that the town does need a medium-sized food store. We've got tiny food shops here and nothing more. But Tesco won't supply a medium-sized food store because it doesn't fit in with what they do. There's no profit there. They want a big food store, with all the extras.'

We're interrupted by a woman who has been browsing through buckets and cabinets for the last five minutes.

'Do you sell fire grates?' she asks.

'No', says Mike, slowly. 'Sorry. Try next door.'

'I already have,' she says.

Mike shrugs apologetically and resumes our conversation. 'Tesco's,' he says, 'are big business, and big business is not interested in meeting our needs. I don't think there's any argument against the concept of a new food shop. It's the size. It's the little man feeling they're getting trodden underfoot. That's where the destruction comes. You walk down Sheringham's streets and you can still see individual shops. They're independent and they're run by the people who own them. A lot of people say to me, 'This is why we come to Sheringham, because of these individual shops,' you know. That's what makes Sheringham what it is.'

A walk around the town's three main shopping streets is revealing. Sheringham is a picturesque little place. Its buildings are mostly brick and Norfolk flint, its roads are narrow and the town is bound at one end by the arm of the sea wall, sweeping low between the sea and the shore. And it does have a certain feel about it.

For a while, I'm not quite sure why. It could be the east wind coming in from the sea, or the slight smell of salt in the air, or the wide skies. It takes me a while to pin down what this feeling is and why but, in the end, I do. It is a feeling of individuality, of character, of uniqueness that is lacking in so many of our communities today. Sheringham has a sense of place.

Much of this has to do with the fact that the town is thronging with healthy local businesses. Not the cobwebby, inefficient, backward little dives that supermarkets always like to say towns rely on before they arrive. These are thriving, colourful local shops. It's quite a sight,

and it makes me realise how rare it is to see a place like this today. The locals aren't exaggerating when they say their high street is something special.

As I walk, I count the number of shops and businesses that are independent, and those that are chains, to gauge how local the economy is. Two things become apparent. First, the sheer variety of shops. This small town has over 42 types of shop, ranging from jewellers to cobblers via pet shops, hairdressers, bookshops and chemists. Second, the local far outweighs the national or global. By my reckoning, Sheringham is home to 95 independent local shops, cafes, pubs and restaurants. Chains, either national or global, have just 18 outlets, and six of these are banks.

It's quite a result, and one that would be hard to replicate in most other towns. If you want to know the reason for it, Reg Grimes has the answer. Reg will tell you in no uncertain terms that the lack of a superstore and this thriving local economy go hand-in-hand – and that he intends to keep it that way.

Reg is a one-man crusade against the destruction of Sheringham by Tesco, or any other monster retailer that dares to try and get its grubby hands on his town. Reg is chairman of the Sheringham Preservation Society, and also the founder of SCAMROD – the Sheringham Campaign Against Major Retail Over-Development – which has spearheaded the town's resistance to Tesco.

I find him in the town's old boatshed, which is in the midst of being converted into a gallery to display local shell art. Reg sits on a paint-stained wooden chair surrounded by empty glass display cases and spirit levels. He has big, grey bushy eyebrows, tinted glasses, a grainy Norfolk accent and a look of determination – a look that has probably served him well over the past decade, which is when the idea of a supermarket for Sheringham first surfaced.

He's been manning the barricades from the off, as Tesco's plans for Sheringham shifted from one site to the next, until finally settling on the community centre and fire station.

'That's when we decided to really get stuck into them,' says Reg. 'We did our research. We got together a local group to look at this. We were quite clear that we

TESCO TIMELINE

1996: Residents of Sheringham, led by Reg Grimes, form the Sheringham Campaign Against Major Retail Over Development (SCAMROD) to fight the supermarket chains vying for a storage space in the unspoilt North Norfolk town.

1999: Tesco applies to North Norfolk District Council for planning permission for a town-centre superstore. SCAMROD joins forces with the Sheringham Preservation Society to launch an intensive anti-Tesco campaign, leafleting and posting ads and letters in local newspapers.

2002: The council's west area planning committee rejects Tesco's bid for planning permission by eight votes to three. Tesco appeals, branding the council's ruling a 'scandal'. A new decision date is set for January 22 2004.

January 2004: A mystery benefactor gives SCAMROD £1,400 to take out a half page ad in the *North Norfolk News* to counter a Tesco ad in the paper claiming that the store bid has 'bags of support in Sheringham'.

January 22 2004: *The Guardian* carries a feature on Sheringham by Paul Brown, who has worked with Reg Grimes to expose secret deals made between council members and Tesco.

SCAMROD hands a 900 name anti-Tesco petition to the council. The signatures have been collected over two weeks at four local shops.

Liberal Democrat MP Norman Lamb forwards letters from worried constituents to the council and expresses his concern at the scheme.

The council approves Tesco's application for planning permission by 12 votes to eight but imposes conditions.

September 2004: Investigative journalist Felicity Lawrence profiles the Sheringham case in the *Ecologist*.

The council caves in to local pressure and a change in government guidance on out-of-town supermarkets and commissions an independent report on the Tesco proposal.

July 2005: The report by consultants DTZ Pida condemns the Tesco scheme.

September 2005: The council discards its earlier ruling and rejects Tesco's bid by 20 votes to nil.



Sheringham
High Street

were not against a decent foodstore. People want one. What we don't want is a great big company like Tesco or the other big three – they're all the same – coming in to wipe out competition and spoil the town.

'Their policy is to take as much trade from the rest of the town as they possibly can. Wherever they've set up store, they've come out with the same old rubbish every time. It's identical: 'This will encourage more people into the town'.

'Utter rubbish.

People go there with their cars; there's a two-hour restriction on their carparks; people go in, buy their food, get in their car and go home. Their sole purpose in coming

here is to capture a large new audience. The actual population here is tiny – maybe 4,000 households. They want 38,000 customers. What they're looking

at is bringing in people from surrounding areas in their cars. It increases traffic as well as everything else.'

As Reg and SCAMROD began looking at the Tesco plan, they began to uncover more and more things that made them deeply uncomfortable. They discovered that the council, which had just spent

£2.5m of public money refurbishing a block of council flats, now proposed to allow Tesco to demolish them to make way for its new store.

They discovered that towns of similar size all over Norfolk and elsewhere had seen a rapid collapse in their local-business base after Tesco arrived.

They discovered that the flint cottages to be demolished were to be replaced by new flats on the town's allotments, with an access road across common land.

'It's about what we are...An individual town, or just like everywhere else? An individual life, or a life controlled by someone else?'

They discovered, too, that the district council, charged with representing the interests of its people, believed that it had no chance of doing so. 'They are too big and powerful for us,' said leader of the council John Sweeney at the time. 'If we try and deny them, they will appeal, and we cannot afford to fight a planning appeal and lose. If they got costs, it would bankrupt us.'

And so, apparently believing that they had no choice, the council's planning committee voted to approve Tesco's application in 2004. But they hadn't banked on SCAMROD, and the strength of local attachment to that sense of place that Sheringham has. Reg and his group swung into action, organising a 900-signature petition, filing objections at every possible point, and working to convince councillors, the local media and the town as a whole that Tesco would be a disaster for Sheringham. Their battle made the national press. Time passed and, as it did, Tesco's luck began to run out.

While Tesco jumped through hoops and battled increasingly vociferous local

opinion, government planning guidance for superstores changed, and doubts grew among local authorities as to the wisdom of their decision to give Tesco the go-ahead. Eventually, the district council caved in and commissioned an independent report on the Tesco proposal. When it was published last year, the report's conclusion was unequivocal: the Tesco plan was bad for Sheringham – the least justified of the four major supermarket applications currently under consideration in the surrounding district. It recommended that such big stores should stick to bigger towns.

The report buoyed up SCAMROD and forced a rethink within the district council. Despite frantic lobbying, the tide had turned against Tesco. Last September, the council's planning committee, which had approved the superstore application two years earlier, rejected it by 20 votes to nil. All their power and influence had apparently availed them nothing. Tesco had lost.

You might expect Reg and the townsfolk to be triumphant, but they remain, instead, cautiously optimistic. Tesco could still appeal against the decision, warns Reg. Anything could still happen. Tesco, after all, is not known for giving up. But for now, at least, Sheringham remains alive.

'When Tesco first came, they said their store would be up and running here by 2003,' says Reg. 'That was their aim. So we've done quite a good job so far, I think.' And he smiles, quietly.

Also smiling, back in his shop on the bustling high street, is Mike Crowe. Like the other local shopkeepers, businesspeople and residents who objected to, or took up arms against, the Tesco invasion, Mike is happy with the result. He is happy because he knows what was at stake, and what questions were posed by this local battle with national implications.

'It's about what we are, and what we want to be,' he says, simply. 'An individual town, or just like everywhere else? An individual life, or a life controlled by someone else? That's what it was all about. And for now, we got the right answers.' ■

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I've often been struck by how differently people see the same place. A photographer sees the world in terms of contrasts and composition. An architect sees it in terms of space and structure. In Iraq there are ten thousand ways to see the world. I consider myself lucky to have seen it through the eyes of a naturalist.

When I think of my time in Iraq, my thoughts turn first to the good things: my friends, both Iraqi and American, and my time observing wildlife. Though my medical unit saw the terrible face of war, I also discovered a country rich in history and natural beauty, where I could pursue my lifelong passion for nature. Iraq is full of people who love the natural world, with whom I felt a natural kinship, who would bring me insects or talk with me about birds and their names and where they could be found.

I was fortunate to be stationed on one of the largest American bases, Camp Anaconda, north of Baghdad in the Sunni Triangle. Its 15 square miles held not only a large portion of the American arsenal in Iraq, but also many birds and other creatures that shared the base with us. Though it was a hive of military activity and a target of almost daily

THE BIRDMAN of IRAQ

When National Guardsman and father of five Jon Trouern-Trend was sent to Iraq in 2004, the keen birdwatcher started a blog of his sightings. His postings are testament to the universally binding and redemptive power of nature

rocket and mortar attacks, it was also a refuge of sublime natural beauty to those who looked. My job in our battalion intelligence section also allowed me to travel to other parts of the country, from the sparse deserts of Al-Anbar province to the awe-inspiring ruins of Babylon and Ur to the palaces and urban streets of Baghdad.

When I started my online journal 'Birding Babylon' shortly after arriving, I got significantly more response than expected. In retrospect it should have been no surprise. Most people's view of life in Iraq focuses on the chaos and violence of war. To read about something as universally familiar as the migration of birds, or watching ducks on a pond, fulfilled a need to know that something worthwhile or even magical was happening, even in the midst of suicide bombings and rocket attacks. I believe this is why I received so many comments, some recounting how they cried – maybe not knowing exactly why – when they read about my often-mundane birding on base. Knowing that the great cycles of nature continue despite what people happen to be doing is reassuring, I think. There is an order we can take comfort in and draw strength from.

For me, the familiar took the form of birds I knew from back home or from my time in Europe. The first ducks I saw, a flock of shovelers, could just as easily have been seen in Connecticut. The barn swallows migrating over our Kuwaiti staging area reminded me of those I could find at our town lake in early April. The wood pigeons and coots on base were identical to the birds I had seen in St James's Park in London. Even the ubiquitous house sparrows, residents of every McDonald's in America, were with me in the most remote desert outpost.

The birds gave me both the excitement of the new and exotic (as with the hoopoe) and the anchor of the familiar. In the predictable migrations of shorebirds, followed by the land birds and waterfowl, I found continuity and reassurance.

There are soldiers in every war who have the naturalist's eye. A foreign land is fertile ground for the curious. I knew a World War II veteran who spent time in the Pacific islands catching lizards and insects and sending specimens to the Smithsonian in Washington. Since returning from Iraq I've found that I was not alone as a birder there. I know of at least a dozen marines, soldiers, airmen, and civilians from several countries who brought their binoculars to war. They share information with me as I continue to write about Iraq's birds and other wildlife online. I try to make the blog a place where people can read firsthand observations from the ground and about international efforts to help the birds. My archive of postings from Iraq is also there (<http://birdingbabylon.blogspot.com>).

What excites me most is learning that Iraqi birders have been surveying the birds of the southern marshes. Life is returning to some of the ruined areas, and some species feared extinct have been seen. To me this is emblematic of the resiliency of life, of both birds and people, in the face of crisis.

I hope to return to Iraq one day armed only with binoculars and a camera. Perhaps an Iraqi friend and I will drive around searching the deserts, the river valleys, the marshes and the mountains for the birds I missed. We will talk about how wonderful it is to be free of the fences and able to go where the birds are instead of hoping they'll fly into our compound. No matter how long it takes to get to the future, I know the birds will be waiting.

POSTINGS FROM BIRDING BABYLON

I'm a soldier in Iraq. I've been mobilised for up to 18 months, which includes a definite 12 months in Iraq and Kuwait. I have been birding since I was 12 years old, which makes it 24 years now. I'm in a New England medical unit. I plan to write about my nature observations during my time here, both birds and other critters.

I've got to get back to work now.

SUNDAY, FEBRUARY 15, 2004

I landed in Kuwait in the middle of the night the first week of February, after spending two months training in an ungodly cold army base in the States. It was a splendid way to train for the desert.

Birding in Kuwait was limited due to my location in the middle of nowhere, surrounded by thousands of coalition troops coming or going to Iraq. During my two-week stay, I'm sorry to say that I saw only five species – house sparrow, barn swallow, rock dove, desert wheatear, and crested lark. Driving down the highway near Kuwait City there were many places that looked very good for birds but alas, I was driving in a convoy. Maybe next time.

The crested larks have turned out to be one of the most common birds, in both Kuwait and Iraq. They are a bit bigger and plumper than a horned lark and have a funny little crest on their head that always seems to be sticking straight up. They run a few feet, stop and look around, then repeat this – all day long.

Our convoy up from Kuwait had to stop because one of the humvees had a flat. We all piled out of the vehicles and set up a defensive perimeter with our weapons pointing out. It was a bit of a surreal scene: I'm lying on the ground with my eye on some guy racing around in a pickup truck, wondering if he's going to take a potshot at us (which would have been suicidal),

BIRDMAN OF IRAQ

while a pair of crested larks were not even 10 feet from me, the male displaying and dancing around.

TUESDAY, MARCH 16

Yesterday I had a little time in the morning and took a three-hour walk around the base. A few migrants were moving through. In the last few weeks I've seen a black redstart, some unidentified *Phylloscopus* warbler, white wagtail, barn swallows, European goldfinches, and chaffinches. At a lagoon on the other side of the base I saw 25 shovellers (ducks) and a couple of redshanks.

Swallows were wheeling around over the water catching insects.

I saw some behavior I had never seen before. High in the air, probably 1,000 feet up, a small group of rooks was riding a thermal just like they were a kettle of broad-winged hawks. They moved up the rising air effortlessly, wheeling around, then at the top they glided away at a fast clip. The rooks are everywhere in the farmland surrounding my base, looking for food in the freshly plowed soil. Many of them will also be moving north.

Tomorrow I get to go on a run to the burn pit. We throw all our garbage into a trailer and haul it off to a giant pile of burning trash. Though it's over a mile away, every day we see a giant plume of smoke. Some days the wind blows it in our direction and a haze descends on our living area. Sometimes little pieces of burnt paper rain down from the sky. I'm looking forward to going, even though I'll probably have to change my uniform and have a shower afterward. The dump is a big draw to gulls and crows, and I'm sure I'll see something good in the gull department.

TUESDAY, APRIL 13

We've had a lot of rocket and mortar attacks in the last few days. One day we had eight or nine hits inside the wire. As a result we need to go everywhere in body armor and helmet. So Saturday was a day for birding in 'full battle rattle', weapon included, of course.

At the laundry pond was a squacco heron clambering around in a patch of reeds. It was a lifer for me. Also at the pond was a big purple swamphen. A great egret flew over while I was checking out the barn swallows to see if there was anything different. There wasn't. Later I went to the



pond by the junkyard, probably two or three acres of open water surrounded by tall reeds. There was lots of commotion in the reeds, with five or six Dead Sea sparrows darting in and out. They are in the same family as the house sparrow but quite a bit noisier – pretty little birds. While I was watching them, a large brown warbler hopped up on a reed. It was my second lifer of the day, a great reed warbler.

FRIDAY, MAY 14

Several of our personnel had to go to the far south for a site visit. One captain had to fly back by helicopter, our preferred mode of travel. It's much safer than driving these days. To avoid being a target from ground fire they fly less than 100 feet off the ground. You are closer, but you are a target for only a split second as you zip overhead.

On the way the helicopter hit a bird. It traveled through one of the windows near the pilot's feet and into the helicopter. Everyone took pictures. The bird was a male pin-tailed sandgrouse. I'd like to see one alive, maybe this year.

SAURDAY, JUNE 19

On my way down to the clinic today I noticed that one of the date palms next to the road has a great load of fruit. (Each female tree can produce 150 pounds a season.) The fruit needs the extreme summer heat to ripen. The Iraqis call the date palm *nakal*, and it holds a special place in their national identity. Palm fronds are a common symbol on money, on government seals,

etc. Date groves are everywhere in the river valleys, the trees growing quite tall (up to 30 metres). The scientific name is *Phoenix dactylifera* – and like the mythical bird rising out of the ashes, millions of these trees rise out of the scorching Iraqi countryside.

There is a saying that a date palm must have its feet in running water and its head in the fire of the sky. There were once 30 million trees in the country. The combined effects of the Iran-Iraq war and Saddam's draining of the southern marshes reduced that number by half.

SATURDAY, JULY 10

I've got to get out and drive the roads at night more. A few nights ago, around 3am, I picked up a few of our soldiers who came in from Baghdad. Afterward, I saw two jackals skulking up the road and a long-eared hedgehog scurrying around by the side of the road. It looked like a prickly little white hovercraft, its feet moving so fast that it seemed to be floating above the ground.

TUESDAY, AUGUST 31

The next morning I birded in the ruins of Babylon proper. My first new bird there was an Iraq babbler, which sat obligingly on a fence for a few minutes before diving into the reeds. In the same area I saw a few young white-cheeked bulbuls, just fledging. A pond near an amphitheater from Alexander the Great's time had a black-crowned night heron, a few little egrets, pied kingfishers, and black-winged stilts. Near the ruins I saw my first laughing dove, walking around near the base of a date tree. I really enjoyed the combination of the lush surroundings, the birds and the history of Babylon – not to mention that the base is much safer than mine, almost never getting attacked.

■ *Birding Babylon: A Soldier's Journal*



From Iraq by Jonathan Trouern-Trend, is published in May; Sierra Club Books, \$9.95. To order your copy visit www.sierraclub.org/books

reviews

RECOMMENDED BOOKS

Building With Cob

Adam Weismann and Katie Bryce
Green books Ltd 2006, £25.00

Building with Cob is the latest addition to the cobbers library. It's step-by-step, 'eco-friendly' approach to the ancient method of cob building allows readers to fully appreciate how to apply this technique in a wide variety of contemporary situations. The lavishly illustrated book, with over 300 colour photos and 85 diagrams, covers every aspect of the trade and is really what natural building needs; a glossy, gorgeous guide to this most ancient of techniques, which makes it relevant to a whole new generation of self builders.

Reviewed by Charlene Whitehead

Wall and Piece

Banksy
Century, 2005, £20

In *Wall and Piece*, Banksy proves just why the term 'vandal' can and has reached the elevated status of a truly skilled artist. The London-based graffiti artist has published a book gathering photographic images of his work from around the world – war zones, museums, tourist spots, zoos and more – to our coffee table. Whether it's stencilled text, rats, or modern paintings with a twist, Banksy reveals

his flair for social and political satire in his subtle yet powerful images. His anti-globalisation, anti-capitalist stance, often presented humorously, provides thought-provoking insight into the plight of modern society. *Wall and Piece* is a funny and thoroughly refreshing work of art.

Reviewed by Jessica Chan

Home Cooking in the Global Village: Caribbean food from buccaneers to ecotourists

Richard Wilk
Berg, 2006, £17.99

One minute into reading the first chapter, I was hooked and converted into a food conscious consumer. Writing about Belize, a tiny spot in the Caribbean in Central America, Wilk traces the tourist mecca's food history with a compelling story that underlines the perils and effects of globalisation on the food industry. He advocates home cooking as an alternative prospect where diversity and culture will survive and flourish, even while being surrounded by an ever-changing global village. Using menus, recipes, colonial advertisements and poetry, Wilk spices up his narrative to good effect and provides an interesting and stimulating way of looking at the anthropology of our consumer culture.

Reviewed by Jessica Chan

Allotted Time

Robin Shelton
Sidgwick & Jackson, 2006, £12.99

In the summer of 2004, art teacher Robin Shelton was a semi-recluse – off work with depression after an acrimonious marriage split. On the brink of a nervous breakdown,

Shelton decided – over a few lagers – to tame an overgrown allotment for therapy. With the help of biker friend Steve, the gardening virgin spent a year transforming a 50 feet by 30 feet weedbed into a super-productive food plot. Shelton's account of the process is gripping – perfectly paced, frank and funny. He is a charismatic narrator and it's a pleasure to follow his potato-patch exploits as he finds a new stability and the black times lift. An appendix of 'veg fact sheets' teaches the reader to grow the basics – like carrots, peas, onions and potatoes – so anyone inspired to grow organic is off to a sound start.

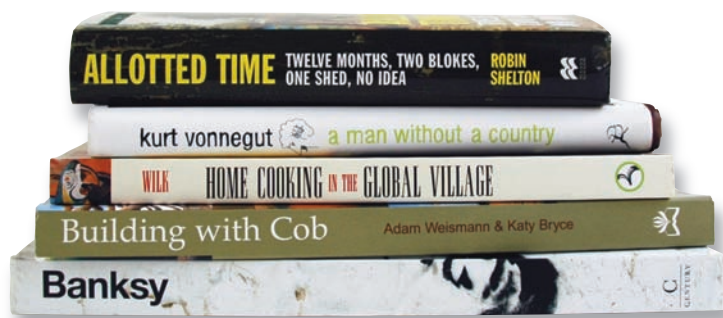
Reviewed by Mark Bridge

A Man Without Country

Kurt Vonnegut
Bloomsbury, 2006, £14.99

Vonnegut broke a pledge never to write again, thankfully. He fuses a fragmented memoir with impassioned comment on the state of the world today. The sketches are acid sharp, unabashed, and a pleasure to read. Vonnegut despises America's 'C-student' regime. But his musings go beyond Bush-bashing to reflect on the carpet-bombing of Dresden – which he witnessed as a POW – and the quality of music inspired by the Vietnam War. His environmental stance is frank: 'We are killing this planet as a life-support system with the poisons from all the thermodynamic whoopee we're making with atomic energy and fossil fuels, and everybody knows it, and practically nobody cares.' A-grade.

Reviewed by Mark Bridge



EVENTS

FIRST INTERNATIONAL ARTS FESTIVAL

27 May – 4 June 2006 at the London Wetland Centre

Celebrating insects in art and the art of being an insect, the **First International Arts Festival** will be taking over the London Wetland Centre in Barnes for a half-term week of talks, films, music, demonstrations and fun.

■ The Festival opens with *Stridulations* (sponsored by Fullers Honeydew Organic Beer) – a night of performance, featuring singer songwriter Robyn Hitchcock, comedian Stewart Lee (*Jerry*

Springer – The Opera), sound artists Mira Calix and Prof David Rothenberg, the Resonance Radio Orchestra and others, performing songs with and about insects.

■ The gallery will feature works in a variety of media from established and upcoming artists including: Bill Woodrow, John Keane, Olly & Suzi, Matmos, Tessa Farmer, Alison Gill and others.

■ An insect photography competition with images from adults and children, judged by George Duffield, Wildlife Photographer of the Year winner for 2005.

■ Throughout the week there will be talks from Professor Richard Wiseman on the History and Lore of the Flea Circus, Professor David Rothenberg on *Why Insects Sing*, Dr Claire Preston on the Artistic Allure of the Bee, Kjell Sandved on his *Butterfly Alphabet*, Dr Beau Lotto on the Perception of Bees, plus forensic entomology, insect cookery displays and, of course, lots of live insects.

■ Our film night on Thursday 1 June includes a rare screening of Saul Bass' mesmerising *Phase IV* (1974), Ladislav Starewicz's animation *The Cameraman's Revenge* (1912) with a new live soundtrack, plus specially commissioned short films from around the world. The night will finish with a discussion on insects in cinema, featuring entomophiles and entomologists. Films for kids will also be screened daily during the week at 10.45am.

■ During the week there will also be the fantastic Insect Museum Circus, freshly hatched from their sell-out London



show, Steve Benbow the Urban Apiarist, pond safaris, pest quests, creepy-crawly craft workshops, educational stalls, sound installations, light shows and a whole hive of fun.

All activities are included in the price of admission to the London Wetland Centre, except the music and film nights where tickets will be required.



For further information please visit www.pestival.org

To book tickets please phone 020 8409 4400.

For more on the London Wetland Centre visit: www.wwt.org.uk/visit/wetlandcentre



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green pages

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Back bench energy hero

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How to fight for an allotment

ECO-FASHION

Dazzling summer party frocks

DOMAINE DE PAJOT

Monty Waldin discovers the wine making art of minimal interference

GREEN SHOPPING GUIDE



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ENERGY HERO: *Alan Simpson*

Alan Simpson, MP for Nottingham South, is on a mission. 'We can't survive this century unless we change fundamentally the built environment and move from thinking of buildings as consumers of energy, to thinking of them as generators of electricity'. **Ben Willis** meets the rarest of breeds, an MP who's walking the talk.

Alan Simpson is on a crusade. He's fed up with the UK's squandering of energy and he wants to put a stop to it. 'The national grid is monumentally inefficient as an energy system,' he says. 'It was a half-decent idea for the middle of the last century, but 70 to 80 per cent of energy put into the grid disappears before you or I even switch the light on.'

As the Member of Parliament for Nottingham South over the past 12 years, Simpson has been campaigning to highlight how our profligate use of energy is crippling the environment. In an ideal world, Simpson says, he would like to see every home in the country generate at least some of its own power. In an even better world, he would scrap the national grid altogether, and replace it with a localised system relying on thousands of contributions from domestic

power generators, rather than have the centralised and inefficient system we use today.

So far, though, he feels he has been ignored. Nothing has changed, and he's getting frustrated. 'One of the great problems in British society is that we are paralysed by the status quo,' Simpson says. 'It's a mentality that says, this is the way we've always done it, so we can't do it any other way. The contrast is with somewhere like the Netherlands, where 60 per cent of their energy comes from decentralised systems that retain, rather than waste, 80 per cent of the energy they generate. We could run this country twice over on the energy that we throw away.'

In fact, so exasperated has Simpson become that he has taken it upon himself to show that, if we really want it, there is an alternative to the status quo. For the past two years, and at a personal cost



of around £300,000, he has helped to design, supervise and build his very own eco-home.

Far from the mud hut or wigwam of popular stereotype, Simpson's eco-house is airy, modern and stylish. His aim is for it to be entirely self-sufficient, recycling all the grey water from showers and washing, and generating its own energy, enough to allow him to sell back to the national grid, so instead of monthly bills, he'd be receiving cheques.

At the time of my visit, however, the house is a scene of chaos. His wife Pascale and young baby have only just moved in and they are still living out of boxes. The builders still haven't quite finished the job, so there are piles of discarded building materials lying around outside. But the chaos does nothing to dampen Simpson's clear enthusiasm for the project as he launches into an explanation of how it came into being.

How it all started

His interest in energy issues grew when, as a community worker, he began campaigning on behalf of the 'fuel poor' – the elderly and the deprived who can't afford to heat their homes. When he entered Parliament 12 years ago, he helped to pioneer new legislation that eventually led to a commitment by the government to eradicate fuel poverty by 2016.

But Simpson's work on fuel poverty also opened his eyes to what he regarded

as an inextricable link between domestic energy consumption and climate change. He saw how much energy was being wasted and realised this would need to be tackled if there was to be any answer to the world's most pressing problem.

'We can't survive this century unless we

change fundamentally the built environment,' he says. 'We have to move from thinking of buildings being just consumers of energy and to thinking of them as generators of electricity.'

Equally, though, he began to realise the limitations of what he could achieve as a

politician. True, he had successfully helped to change the law on fuel poverty. But with energy security and efficiency, he felt there were more practical things he could do. 'It struck me that if people like me who campaign about how to tackle this problem head on don't do things ourselves, there is a credibility gap that is difficult to live with,' he says.

After making up his mind to build an eco-home, Simpson set out to find suitable premises. Instead of starting from scratch, Simpson says he decided to refurbish an existing building to show that eco-building principles could be applied to old as well as new homes.

He recalls the day when a friend called to alert him to an abandoned lace mill he'd discovered. 'He said, if you're looking for somewhere derelict, look no further – this place hasn't been occupied for 40 or

'We could run this country twice over on the energy that we throw away.'

50 years. It has nothing in it, no services, the internal stairs have collapsed; it's just you, 4000 pigeons and all the pigeon shit you can shovel.'

It's now two years on, and Simpson's house is scrubbing up pretty well. From the outside, it's nothing much to look at. It's a stand-alone building in a backstreet of Nottingham's trendy Lace Market area. Approaching visitors are confronted with the large windowless back wall of the house that gives it a rather gloomy aspect. Certainly, there's nothing from its outward appearances to suggest it's an eco-home.

The house that Alan built

But all the interesting bits are carefully tucked away. Hidden from view three stories up, the south-facing roof of



SIMPSON SAYS:

Top tips for maintaining a more energy-efficient home

■ **Insulate:** it's the most cost-effective way of making your home more energy efficient. You can get a 15-per-cent return on your investment through energy savings – probably more as energy prices begin to go up.

■ **Retain as much as you can:** if you're refurbishing your house into an eco-home, look at the structure you have and what you can keep. Everything saved reduces someone else's energy consumption.

■ **Be imaginative with materials and recycle wherever possible:**

Anything from wine bottles to cardboard tubing can be used as attractive and thermally efficient building materials. It just requires some imagination.

■ **If you're thinking about micro-generation, take stock of where you are located:**

If you're in an exposed area where air flows freely, wind power is an option; if you have a big garden, you may have space for a ground-source heat pump for your hot water.

■ **Solar power:** this can be used to both generate power and heat your water, so consider a combination if your roof is big enough.

■ **Get involved:** the Association of Environment Conscious Builders runs regular campaigns on a number of built-environment issues. To find out more, visit www.aecb.net.

the house is made up entirely of solar panels that provide the house with around 75 per cent of its power. Inside, complementing the solar unit is a Whispergen micro-combined heat and power (CHP) generator – a kind of super-efficient boiler that generates electricity at the same time as it heats the house. 'The idea is that you're much more likely to be using your boiler in the evening when the sun's not out,'

Simpson explains. Together, these provide a potentially limitless source of power. And in due course, once Simpson has settled in, he plans to begin selling the excess energy he generates back to the power company. This could happen in one of two ways, Simpson says. 'One way is just to sell the energy back to the grid; the other is to sell carbon credits – so that I get paid for the carbon-free energy that I generate. I haven't decided which one to go for yet.'

But the biggest energy-saving aspect of the house, according to Simpson, is its insulation. Huge amounts of heat in a home are lost through poor insulation – around 50 per cent through the roof and walls, and some 20 per cent through single-glazed windows.

So, while he generates his own power through green technologies, Simpson has also tried to minimise the amount the house actually consumes by installing extensive insulation throughout – in the loft, on the exterior walls in the form of a recycled paper and plastic render, and by double-glazing all the windows. All the internal walls are made from compressed recycled straw, which is an excellent heat

and sound insulator, Simpson says. At the very least, he expects, in the long term, to make a 15-per-cent return on the amount he paid for insulating his house properly – and possibly by as much as 25 per cent as energy prices go up.

And insulation is even employed to

aesthetic effect in one of the house's main design features. Although he wanted to stick to his eco principles, Simpson was keen that the property shouldn't end up looking drab. In the end, he found a way of combining both these aims by cladding a two-storey high wall in the kitchen/living area entirely in large lengths of recycled cardboard tubing – 'somewhere between bog rolls and cardboard organ pipes', Simpson jokes. 'It's basically a six-metre high wall of toilet roll,' he says, patting the tubes fondly. 'But it's all recycled and thermally efficient, and it's been made fireproof so it won't contribute to the instant demise of the place.'

Elsewhere in the house, maximum use is made of natural lighting to minimise the use of electricity. The floor above the main stairwell that stretches three-quarters of the height of the house has been made out of a tough weight-bearing glass that allows light from large skylights in the roof to flood through. One of the windows in this space is also made from the cut-off ends of wine bottles to create a kind of arty double-glazing.

But it hasn't all turned out quite as he'd planned. One of the big compromises he had to make was on his plans to install a wind turbine on the roof which, it turned out, wouldn't have suited the house's enclosed location. 'You have

'It has nothing, no services, the internal stairs have collapsed; just you, 4000 pigeons and all the pigeon shit you can shovel.'





to have a constant windstream to get the best value out of a windmill,' he says. 'In an urban context, we weren't convinced we were going to get that.'

The other big problem with the house, at least in terms of the ideological point he's trying to make with it, is, of course, its cost. In all, he paid around £300,000 – £100,000 for the building and £200,000 for the refurbishment. This is all very well when you've got a tidy MP's salary going into the bank each month, but what good is this going to be for people who are pushed even to buy an energy-efficient light-bulb?

'It is a one-off, and I accept that,' Simpson concedes. Nevertheless, he believes there is a lot more that government could do through tax breaks and grants to make green technologies affordable. And, as a naturally anti-free-market politician, he is also keen to see the construction industry forced to adopt technologies such as micro-generation and insulation as standard.

He likens it to the situation in the last century when the UK's cities, particularly London, were thick with smog from industrial emissions. 'All our cities had massive problems with public health and smog,' he says. 'For years, governments

tried to encourage industry to cut back on pollution – and no one took any notice. In the end, the government of the day introduced the Clean Air Act, and they gave industry a three-year period and said, after that, it's illegal – you'll be fined.

'People were screaming and shouting, but the reality was that business stayed in business; it was just cleaner. And it became cleaner by obligation as a result of legislation. It's exactly the same as what we've got to do now. It isn't rocket science; it's just a matter of incorporating these things into standard design requirements for the 21st century.'

Nuclear no-no

The big no-no as far as Simpson's concerned is what many fear is now inevitable: the resurgence of nuclear power as the answer to the pending energy crisis. 'Nuclear was a scam first time round and it would be a scam again,' he says. 'It is utterly irrelevant to providing the energy security of Britain in the 21st century and, in fact, would probably steal most of the financial resources needed to move us towards a genuinely sustainable situation.'

Simpson is in a hurry to get to his next appointment, so I take my leave.

But as I do, I suddenly wonder at his motivation for all of this. The hard work seems to have paid off and resulted in a fascinating home, but it seems an awful lot of effort to have gone to just to make a point. He is, after all, an MP and, therefore, not averse to the odd eye-catching publicity stunt. Is this just a ruse to win a few more votes, or does he really hope to achieve something bigger by doing this?

'I don't know how much of a vote winner it will be,' Simpson shrugs. 'But this excites me more than anything I've ever known: micro-generation has the potential to transform the world in a way that previous generations have only been able to wish for. It would also provide us with greater energy security. You can understand how easy it would be for Al-Qaeda to target a nuclear-energy station. A hit on a solar energy roof doesn't quite have the same clout, does it?'

■ Ben Willis is a freelance journalist

ECO POWER CAMPAIGN

AIM To meet the UK's energy needs from local, clean, renewable sources

In the UK we need to move from our dependence on non-renewable, air polluting, climate changing, centrally generated, hugely inefficient and increasingly expensive sources of energy – gas (40%), coal (30%), nuclear (20%), oil (5%) – to non-polluting, small-scale energy sources generated as close to users as possible, eg wind, hydro, tidal, solar, biofuels, ground source heat etc.

HOW? Supplying the current (and expected increased) energy demand in the UK, while keeping prices for energy low is IMPOSSIBLE. We either confront this and start to adapt or we stick our heads in the sand and moan about the inexorable rise in our energy bills. Each one of us, starting at home and then moving out into our local communities and workplaces, needs to:

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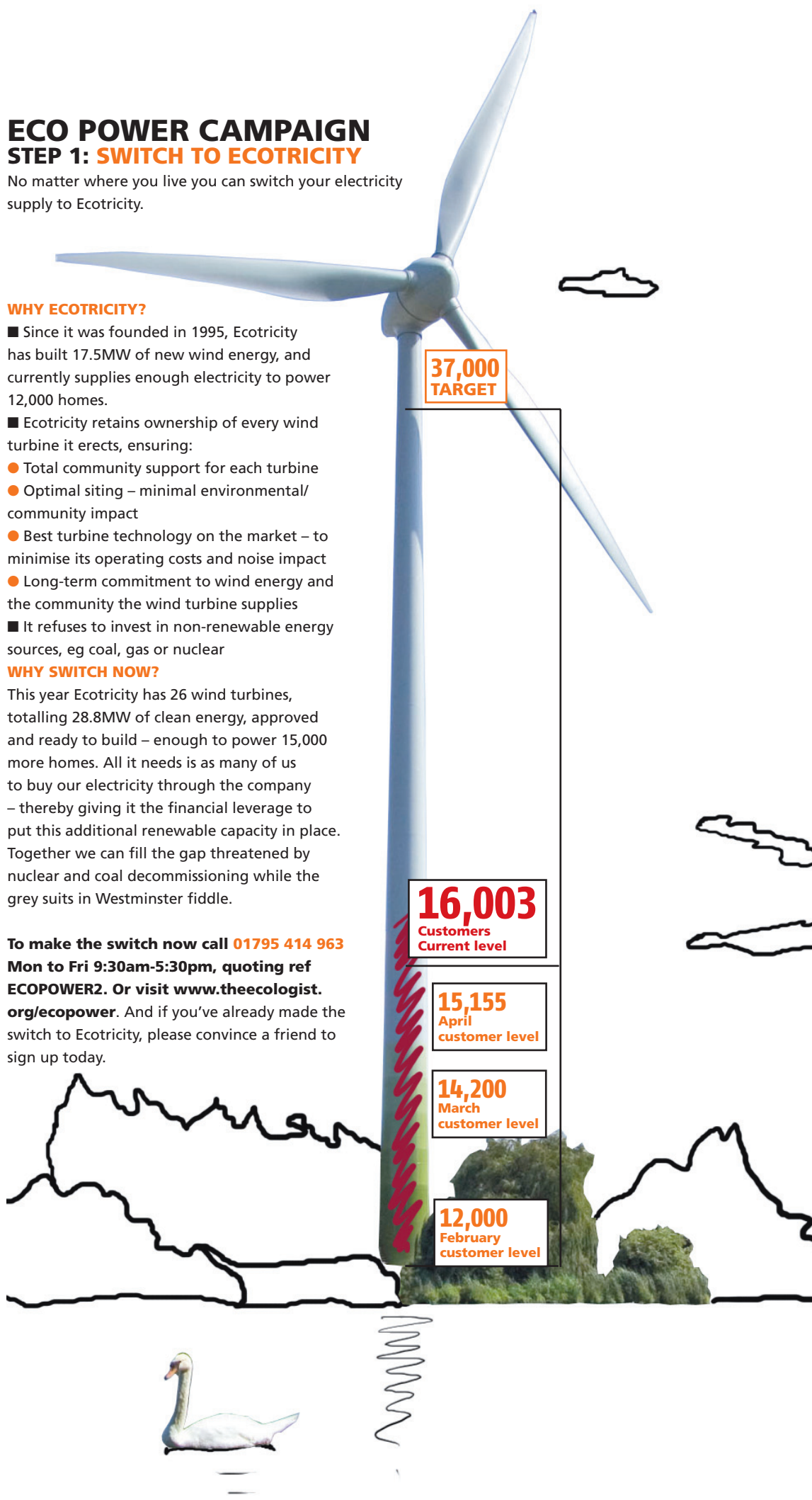
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PITCHFORK POLITICS

Paul Kingsnorth weighs in on how to get your hands dirty campaigning for more allotments in your local area

Looking back, I didn't know how lucky I was. Three years ago, having decided to take the plunge, I simply wandered through the gates of the allotments nearest to me and asked if there were any free plots. There were, so I took one there and then. It couldn't have been any easier.

This isn't the case for everyone. In fact, one of the most common questions from readers of this column is, 'How do I get an allotment?'

'Lucky you,' writes Theresa Bristow from Nottingham, with just a touch of bitterness. Her attempt to get a local plot foundered when she was told: 'There is a waiting list of 13 already and allotments only become available when people die'. The remarkably patient Ken Finn from Brighton, meanwhile, was on a waiting list for two years before he got his plot. Jodie Pitt has the same problems in Weston-super-Mare, where she's been on a waiting list for a year and is still, well, waiting.

So what's going on? Why are so many people finding it so hard to get an allotment? And what can they do about it?

I considered it my duty as a responsible columnist to find out.

First, the bad news. It is, indeed, increasingly difficult to find allotments. Demand for them is growing fast and outstripping the supply. Added to this is the pressure for development, spurred by government house-building targets, and escalating land and property prices, leading predatory developers to lick their lips over what they see as 'wasted' urban land. Applications to develop existing allotments are currently running at a rate of about 50 a year. This has spurred 'Save Our Allotment' campaigns from Bicester to Eastleigh, Lewisham to Liverpool.

In short, there are not enough



allotments to go round.

But this is where the good news starts. For it turns out that you – yes, you – have a legal right to an allotment if you want one. And if there aren't enough about – well, you can do something about it.

To understand why, we need to travel back to 1908, and plunge into the text of the Smallholdings and Allotments Act. This legislation, which is still in force, obliges local authorities to provide sufficient allotments to meet local demand. This means, according to

Geoff Stokes of the National Society of Allotment and Leisure Gardeners, 'exactly what it says – councils have a legal duty to provide a sufficient number of plots to meet local demand, and you should not have to wait more than a reasonable amount of time for one.'

If you are waiting, or if you simply can't find a plot, you can use the law to your advantage. All you need is for six people who are registered on the electoral roll to get together and put a well-argued case to the council, explaining that the demand for allotments is not being met and that it's their legal duty to meet it. Legally, they will have to respond – preferably by providing more allotments. If this fails, according to Stokes, you would be within your rights to take your council to a judicial review – though you'd have to have a lot of time on your hands and money in your pocket.

There are, of course, a few complications. Inner London boroughs, for example, were exempted from the 1908 Act, so if you live in one of them, you may have a tougher time. Private allotments – which might be owned by churches, companies or landowners – are also exempt. In general, though, the basic principle applies if you live anywhere outside of inner London – and, judging from my emails, very few people know about it. Hardly surprising, as councils are reluctant to inform you of how lucky you are.

So take heart and take note: your local authority has a legal obligation to provide you with an allotment. If it doesn't do so, you have a legal right to take action to get one! Still on that long waiting list? Find yourself five other registered voters, and give your council hell. The more of us that do so, the faster things will change.

FIGHTING BACK

■ National Society of Allotment and Leisure Gardeners

Find out what you're entitled to and how to get it: www.nsalg.org.uk

■ *The Allotment Handbook* by Sophie Andrews (published by Eco-Logic books: www.eco-logicbooks.com)

How to save allotments from developers: a guide to the law, with tips and contacts

■ Allotments UK Campaign Forum

The website has a section dedicated to

ongoing campaigns in which plot-holders update each other and appeal for help:

www.allotments-uk.com/forum

■ Office of the Deputy Prime Minister Mr Prescott explains exactly what you are entitled to – well worth a browse. Know your rights!: www.odpm.gov.uk

■ Scottish Allotments and Gardens Society. Law and practice is slightly different in Scotland. This excellent site will help you through the maze: www.sags.org.uk



READ THE LABEL COLOURS AND DYES

Most of us try to avoid foods containing artificial colours, so why do we continue to buy bodycare products and cosmetics made with unnatural and potentially harmful colours and dyes? **PAT THOMAS** REPORTS

It starts when you get up in the morning. You grab a bar of soap or a bottle of shower foam and you have a wash. That's probably your first dip into the daily palette of synthetic tints and hues that will colour much of your day.

Contact with cosmetic colours is a 24/7 experience that includes multiple exposures to multiple products. Regulatory authorities and cosmetics manufacturers go to great lengths to assure us that these colour additives are safe and add that all-important feel-good factor to their products. Yet, there is little objective scientific evidence that this is the case, and what research there is has often been funded by the industry.

While a single use of a single coloured product may be 'safe', your total daily exposure to all coloured products – soaps, body lotions, shampoos, conditioners, shaving cream, toothpaste, deodorants, hair dyes, lipsticks, eyeshadows and blushers – may add up to an unacceptable risk.

Colours used in cosmetics and bodycare products generally fall into one of three basic categories: organic, inorganic and natural.

Organic colours are derived primarily from petroleum and are sometimes known as 'coal-tar dyes' or 'synthetic organic' colours. Inorganic colours include clays, iron oxides (which can produce yellows, browns, blacks and reds) and ultramarines (including chromium-oxide green, mica,

titanium dioxide, zinc oxide and kaolin clay). Natural colours are those that are derived from plant or animal sources.

Although they can be from 'earth' sources, inorganic colours are not generally considered natural because they are heat-treated to various temperatures to produce different colours. Some, like mica, can be coated with organic colours to create a particular hue.

In addition, while many oxides and ultramarines were mined in the past, because of concerns over purity (mined products can be contaminated with lead, arsenic, mercury, antimony or selenium), many of these colorants today are manufactured in a lab.

Checking for the presence of potentially harmful dyes in cosmetics is difficult because the same colours can be listed on the label under any number of different names.

In Europe, colours are generally listed by their International Nomenclature for Cosmetic

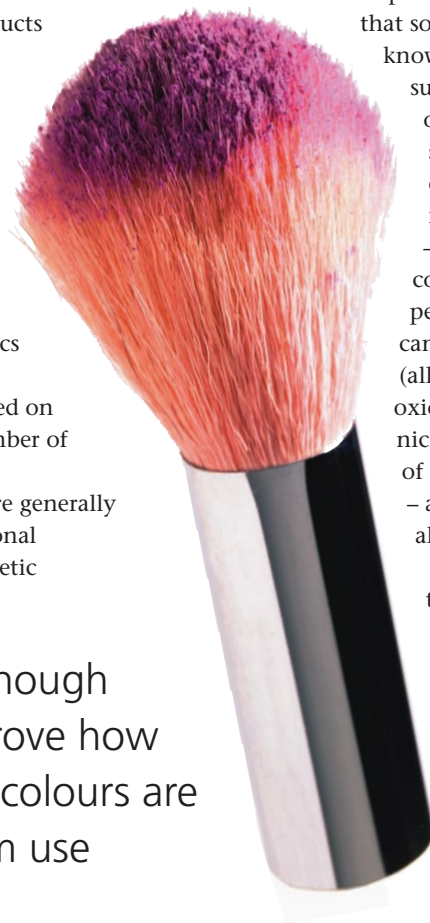
There is not enough evidence to prove how safe cosmetic colours are with long-term use

Ingredients (INCI) numbers, usually indicated by the prefix 'CI' followed by five numbers. In the US, the same colours are listed using an FD&C (Foods, Drugs and Cosmetics) or a D&C (Drugs and Cosmetics) prefix.

To add to the confusion, even the 'experts' cannot agree on an international 'safe' list of colours. This means that some colours may be allowed in one country, but banned elsewhere.

All this would not be important, but for the fact that some cosmetic colours are known to cause problems in susceptible individuals. Most organic colours can cause skin irritation, and some can block the pores. Even inorganic mineral pigments – which are generally considered safer than petroleum-derived colours – can and do produce sensitivity (allergic-type) reactions. Iron oxides, for example, contain nickel and a large percentage of the general population – around 18 per cent - has an allergy to nickel.

More worrying is the fact that many commonly used organic colours have been shown to cause cancerous growths in the skin of animals. This may be either because the the raw materials used to make them are carcinogenic or because of the presence



PHOTOGRAPH BY CORBIS

of carcinogenic impurities in some batches.

Colour con

In bodycare products, colour serves no practical purpose except for its psychological effects. Manufacturers use colour to link the product to an emotion or state of mind. Thus, a pink product will be perceived as soft and girlish, which is why it is so often found in products for teenagers and, ironically, 'mature' women. A light green colour might indicate freshness, whereas white and blue have come to be associated with purity and sensitivity.

While new colours are being developed all the time, this is not always done with an eye to safety. For example, one of the newest inventions, FD&C Red 40 (also known as Allura Red or CI16035) is a popular addition to eyeshadows. It has been in use since 1994 even though the safety testing was entirely funded and carried out by the people who make it. The US National Cancer Institute reports that p-credine, a chemical used in the manufacturing of FD&C Red 40, can cause cancer.

At this time, there is simply not enough evidence to prove how safe any cosmetic colours are when they are being used on the skin daily over the longer-term. If you absolutely must use a coloured product, learn to check the label for colour additives beginning with 'CI75' – these are 'natural', usually vegetable-based colorants (see also the list opposite).

Those beginning with 'CI77' are inorganic colours that appear to be safer than their organic alternatives. Some natural ingredients – such as chamomile or kelp – also double as colouring agents.

But if you want to use safer products, and you want to avoid having to make your way through the colour maze on the label as well, the single most effective thing you can do is choose products that are not coloured at all.

WHAT YOU CAN DO



The single most effective thing you can do is choose products that are not coloured at all

1 Go into your bathroom and look at the labels of your favourite products. Do any of them contain the following colours?

| COMMON NAME | EUROPE | US |
|--|----------|-------------------|
| <input type="checkbox"/> Alizarine Cyanine Green F | CI61570 | D&C Green 5 |
| <input type="checkbox"/> Acetate Blue G | CI 64500 | Disperse Blue 1 |
| <input type="checkbox"/> Acetate Fast Yellow G | CI11855 | Disperse Yellow 3 |
| <input type="checkbox"/> Acid Red 33 | CI 17200 | D&C Red 33 |
| <input type="checkbox"/> Allura Red | CI 16035 | FD&C Red 40 |
| <input type="checkbox"/> Brilliant Blue FCF | CI42090 | FD&C Blue 1 |
| <input type="checkbox"/> Fast Green FCF | CI42053 | FD&C Green 3 |
| <input type="checkbox"/> Indigo Carmine | CI73015 | FD&C Blue 2 |
| <input type="checkbox"/> Pigment Orange 5 | CI12075 | D&C Orange 17 |
| <input type="checkbox"/> Pigment Red 53 barium salt | CI15585 | D&C Red 9 |
| <input type="checkbox"/> Pigment Red 53 sodium salt | CI15585 | D&C Red 8 |
| <input type="checkbox"/> Ponceau SX | CI14700 | FD&C Red 4 |
| <input type="checkbox"/> Rhodamine B | CI45170 | D&C Red 19 |
| <input type="checkbox"/> Sunset Yellow | CI15985 | FD&C Yellow 6 |
| <input type="checkbox"/> Tartrazine | CI19140 | FD&C Yellow 5 |
| <input type="checkbox"/> Titanium Dioxide | CI 77891 | Pigment White 6 |

2 If so, photocopy these pages, tick the boxes of the worrying colours and write to the manufacturer's customer services department, asking them why, given that the following natural, non-toxic colours are available, they are using such ingredients in their product.

- Alfalfa
- Alkanet root oil
- Annatto (CI75120)
- Beetroot
- Bentonite clay (CI77004)
- Beta-carotene (CI75130)
- Blue chamomile
- Calendula petals
- Caramel
- Carmine (CI75470)
- Carrot oil extract
- Charcoal (CI77267)
- Chlorophyll
- Cocoa powder
- Grape juice
- Henna (CI75480)
- Iron oxides (CI77489/77492)
- Kelp
- Turmeric

3 Ask the manufacturer to send a copy of their reply to **The Ecologist, Unit 18 Chelsea Wharf, 15 Lots Rd, London SW10 0QJ** or, failing that, pass the reply you do get on to us, as we will be monitoring all feedback for future investigations and campaigns.



THIS MONTH'S VINEYARD:

DOMAINE DE PAJOT

Monty Waldin discovers the process of extracting subtle flavours just under a grape's skin and the art of minimal interference

Not so long ago, France's organic-wine producers were habitually accused of producing rather 'old-style' wines that were unappealing to modern consumers, who had become used to the technologically brilliant, clear-as-a-whistle wines coming from Australia, Chile, California and New Zealand. It has taken France's smaller, more traditional-minded wine growers about a decade to catch up. However, investment in new technology in both the vineyard and the winery, coupled with a desire to make wines that today's consumer wants to drink rather than wines that only the winery owner's grandparents wanted to drink, has brought about a huge turn-around. The organic Domaine de Pajot in Gascony, in the southwest of France, is a perfect example of this new approach.

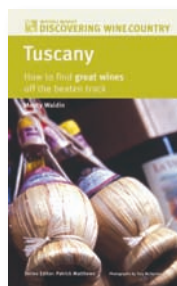
The domaine is owned by Damien Barreau, his wife Véronique and their three children. Damien says, 'We are not making wines for our pleasure, but for the wine drinkers. This, of course,

means two things. First, making wines the consumer wants to drink and can understand, with simple labels and without any wine snobbery. Second, we have to deliver on price. You can think you are making the best wine in the world, but if ordinary people can't afford to drink your wine, then you are doing something wrong.'

It's hard enough for 'normal' French wine producers to keep prices down, but even harder for organic-wine producers, who not only have to pay for the costs of organic certification, but are also more reliant on more expensive manual, rather than cheaper mechanised, labour.

'Well, we can save money,' says Barreau, 'for instance, by sticking to basics in the vineyard. We refuse to pay for certain organic-approved sprays, like seaweed extracts, which have become very trendy at the moment, but which are really expensive and don't have much effect on the vines long term. It's really tempting when you switch from conventional to organics to simply replace the chemical spray

To order a copy of Monty's new book *Tuscany* at the special price of £9.75 (RRP £12.99) including post and packing, please call 01903 828503 and quote the code MB14.



you used to use with an organic-approved one, without really asking yourself: 'Do I really need to spray seaweed extract?' You can keep the skin on your face healthy with a healthy diet, and by drinking plenty of water – you don't need mud masks and facial scrubs every morning, you know.'

Keeping it simple at Domaine de Pajot means, says Damien 'never stopping yourself from asking basic questions like 'What do my vines really need?' Apart from sun, obviously, they need water, which is free from the sky as rainfall, and healthy soil. So, we interfere as little as possible with the ground between the vines to make sure that any rain that does fall is retained by the vineyard soil, so the vine roots can use it. Remember that if the soil is too dry, the vine not only cannot drink to prevent itself from becoming too thirsty, but it cannot feed, too, as vines, like all plants, take their food up as liquids, not solids. Second, we pay great attention to making compost to feed the soil, so the soil can regulate itself, its worm-life, its nutrients and so on, becoming a healthy place for the vine to live in and grow from. We make our own compost from animal manures and green waste which we recycle. So ►

ecologist ORGANIC & BIODYNAMIC WINE CLUB

Why buy 'ORDINARY' wine when Organic & Biodynamic wines are...

- ✓ Intriguingly different and reassuringly delicious
- ✓ Grown without chemicals, using traditional viticulture methods
- ✓ Fighting the commoditisation of wine by multinational wine labels
- ✓ Lovingly produced by small-scale, family-owned & -run vineyards
- ✓ Creating rich and diverse habitats for creatures great and small
- ✓ Excellent value

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Mon to Fri 9:30am-5:30pm, quoting ref **VINTAGE02**

WINE CLUB CASE 2: SPRING BLOOMERS

April selections:

CHATEAU RICHARD:

1) Bergerac Blanc Sec AC, Les Charmes White (X2); 2) Bergerac Blanc Sec AC, Château Richard (X2); 3) Bergerac Rouge AC, Les Charmes Rouge (X2); 4) Bergerac Rouge AC, Château Richard (X2); 5) Saussignac AC, Château Richard (X2)

May selections:

DOMAINE DE PAJOT

6) Vin de Pays des Côtes de Gascogne Blanc (X2)



TERMS & CONDITIONS

*Available in the mainland UK only. Please allow seven working days for delivery. Purchasers must be 18 years or over. Offer open to *Ecologist* subscribers. One case per subscriber while stocks last. No customer substitutions. Wines supplied and delivered by Vintage Roots, Bridge Farm, Reading Road, Arborfield Berkshire, RG2 9HT.



we don't pay for organic fertilisers. And if the vine has a healthy base – in other words, strong roots in a moisture-retentive and well-composted soil – you won't need to spray things like seaweed extracts on the vine leaves. The leaves will be able to look after themselves.'

One big money-saver is that Domaine de Pajot picks its grapes by machine. 'We have a large vineyard,' says Barreau, 'of around 38 hectares (94 acres). If we picked it all by hand, our wines would be priced out of the market. Remember, we're in Gascony here, which is famous for the Three Musketeers and Armagnac, but not for wine. So we can't price our wines too high, and this means that, to price our wines fairly, we must pick with a machine. Also, as picking by hand is 20 times slower than with a machine, it would mean we might not be able to pick all the grapes before the autumn rains begin. If rain falls on ripe grapes, they can rot almost overnight. If that happened to us, we'd have no crop and be out of business. Some commentators criticise machine-picking as being environmentally detrimental.

'But if you have 50 pickers driving sometimes long distances to and from the winery every day for a month to pick your grapes, is this more or less environmentally friendly than having one person driving one machine-harvester all day? I'd love to

pick by hand, and bring the grapes to the winery in a horse-drawn cart like I remember my grandfather, who founded this Domaine, did, but it is simply not possible.'

One advantage of machine-picking is that the grapes arrive at the winery as a sloppy mush of skins and juice. 'It looks a bit strange,' says Damien Barreau, 'but for dry white wines, it allows us to soak the grape juice on the grapeskins for eight hours or so. We do this to extract extra flavour into the juice. Many quite subtle flavours are found just under the grapeskins, so if we can get these into the juice before the yeast converts the sugar in the grapes into alcohol, we get the maximum amount of flavour in the wine. Hand-picked grapes are pressed quite quickly, within an hour or so, so there is less time for the juice to soak up these flavours as it trickles over the grapeskins and out of the wine press. By fermenting the juice at cool temperatures, ageing the wine on the lees (see the wine profile below for what this means) and bottling the wines within just a few months of harvest, we retain all of these flavours in the wine,' says Barreau.

Domaine de Pajot produces some of the best-value organically grown dry white wines in France, fully justifying the Barreau family's strategy of spending wisely in the vineyard and 'keeping it simple' in the winery.

WINE RECOMMENDATION

Domaine de Pajot has been certified organic by Ecocert France since 2003.

Vin de Pays des Côtes de Gascogne Blanc, Domaine de Pajot

This dry white wine is blended from four different white wine (green) grapes: Colombard, which brings a delicate flavour of white pear; Ugni Blanc, which gives the wine its crispness; Gros Manseng, which adds a wonderful twist of lime; and Sauvignon Blanc, which has quite bold, exotic flavours of gooseberry. The wine has broad, powerful aromas, thanks to the soaking of the grapeskins on the juice before fermentation. You'll also pick up a soft, bready character when you taste it, giving an impression of richness. This comes from allowing the wine to mature on the lees, the sludge of dead yeast left over after the fermentation has ended. 'It's another way of getting some richness in the wine for no cost,' says winemaker Damien Barreau. 'You could get richness in the wine by ageing it in oak barrels, but these add at least £1 per bottle to the cost of the wine, plus they require a lot more work in the winery, moving them around, cleaning them and so on. We prefer to use the free natural resource of the dead yeast, making a rich-tasting wine for everyday drinking.'



CONTACT DETAILS

Domaine de Pajot, 32800 Eauze (Gers-Gascogne)

Tel 05.62.09.93.50

Email

domainepajot@wanadoo.fr

Website

www.domainepajot.com

If you plan to visit Domaine de Pajot, call ahead.

And remember that the estate is close to the town of Eauze, the capital of France's famous Armagnac brandy region. Domaine de Pajot produces both non-vintage and vintage-dated Armagnacs, dry red wines and several white wines.

ECO-CLOTHING *News*



WEAR ORGANIC: An A to Z guide



Conscious Earthwear from Ciel

Want to look great without supporting pesticide abuse or sweatshop labour? Click here...

The Pesticides Action Network (PAN), a group which campaigns to stop pesticide dependence, will this month launch the UK's very first exhaustive online resource to the what, where, why and how of organic clothing. Shops that sell organic clothes are included on an interactive map, allowing users to locate retailers nearest them. Mail-order retailers and the labels/brands that sell organic and fair-trade products will also be

listed on the website.

And if you've ever wondered about the difference between fairly traded or Fairtrade, or what exactly 'azo-free dyes' are, the website also serves as a reference

guide for questions regarding standards and certification, and health and environmental issues surrounding sustainably made clothes.

Last, but not least, the site will allow you to see firsthand how organic cotton farming has impacted farmers, communities and the environment through the stories of two PAN-supported farming projects in Senegal and Benin.

Buying organic is more than a matter of choice: choosing an organic product over a non-organic one can actually mean the difference between life and death for a small farmer. Now you have the information at your fingertips to make a difference.

■ Go to: www.wearorganic.org



PICK OF THE MONTH

Hand-stitched leather fold-up Butterfly Slippers for men and women, £55 by Meher Kakalia. Comes with travel bag.

To buy: www.meherkakalia.com



1. Pierre Garroudi dress
2. Sari dress
3. Debbi Little dress
4. Jo Maiden for Juste dress
5. Debbi Little dress



A photograph of two women walking together in a garden. The woman on the left is wearing a white, sleeveless, form-fitting dress with a white shawl draped over her shoulder. She is wearing white tights and brown high-heeled shoes. The woman on the right is wearing a light blue, spaghetti-strap dress with a gathered bodice and a voluminous, ruffled skirt. The bottom layer of the skirt is a bright yellow. She is wearing light blue tights and pink high-heeled shoes. They are both smiling and looking towards each other. The background features a large, leafy tree, a stone fountain with water spraying, and a wooden bench on the left.

PARTY FROCKS

Dazzle in these ethical summer dresses

HOW TO FIND OUR FEATURED *party frocks*

1 Royal blue dress £250 by **PIERRE GARROUDI**

Made from recycled dress-cabinet fabric that Garroudi found on a street near London Bridge. All of Garroudi's clothes are made from 'found' or donated materials that he recycles. He creates one-off unique designs, and has a bespoke service in which he refashions old items of clothing according to your measurements and specifications.

To buy: mail-order from **www.pierregarroudi.com**, tel: 020 7378 1187
Secondhand white shoes £12 from **Hurwundeki**, 98 Commercial Street, London E1 6LZ, tel: 020 7392 9194

2 Green silk dress £96 by **SARI**

Made from recycled saris. Sari Couture runs the 'Save a Sari Campaign', which recycles and refashions donated saris. The objective of the campaign is to collect saris and divert them from landfills, which often happens when they are donated to charity shops. Ten per cent of Sari Couture's sales are donated to international children's charities (such as The Disaster Emergency Committee and Sense International).

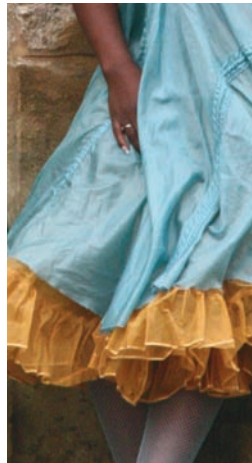
Range: green (sizes 10 and 12) or maroon red (size 14)

To buy: mail-order from Equa, tel: 020 7359 0955, **www.equaclothing.com**

Go to: **www.saricouture.com** to see their range of clothing

To donate saris: contact Sital Haria on 07734 443 350 or email sital@saricouture.com

Red satin Ellie shoes £176 by **Beyond Skin**
To buy: mail-order from **www.beyondskin.co.uk**



3&5 Sea blue and lime green dresses £180 by **DEBBI LITTLE**

Bespoke dresses made from recycled 1945 parachutes and dyed with natural dyes. All of Debbi's dresses, skirts and coats are made from

parachutes sourced from around the world. Little was propelled into the idea after buying an old parachute at Bermondsey market and getting a lesson from the woman selling it on the wartime 'make-do and mend' philosophy. One parachute can make around 30 dresses and nothing goes to waste. Styles vary from season to season.

Range: coral pink, white, fuchsia, scarlet red, peach

Sizes: 1 (8–10), 2 (12–14), 3 (14–16)

To buy: tel: 020 8691 1522

Go to: **debbilittlestudio106@yahoo.com**

Goa shoe £70 and Doll shoe £85 made by

Terra Plana

Made from vegetable-tanned nubuck leather and soft nappas with stitched-on

latex driving sole.

Range: (Goa) off-white/cuoio and red/cuoio; (Doll) black/cuoio and multicolour print/cuoio

Sizes: 3–8

To buy: mail-order from **www.terra-plana.co.uk**, tel: 020 7407 3758

4 White dress around £500 by **JO MAIDEN FOR JUSTE**

Fair trade silk/Jamdani dress using natural, vegetable-based dyes. Made in Bangladesh, Juste aims to promote the skills of craftspeople across the globe.

Range: bespoke dresses offered in a wide range of naturally dyed colours from around £500. Bridalwear is also available

To buy: email **info@juste.co.uk**

■ Secondhand Karen Millen shoes £18 from

TRAID

TRAID (Textile Recycling for Aid & International Development) is a registered charity that collects, recycles and sells secondhand clothes and shoes in order to fund projects for some of the world's poorest communities.

Go to: **www.traid.org.uk** for a list of TRAIT shops, tel: 020 8733 2580



Special thanks to the **Oxford Botanic Garden**, where our shoot took place. Created in the 1630s, the Oxford Botanic Garden is the oldest botanical garden in Great Britain. With a collection of 7,000 different types of plants, the garden plays an important role in protecting endangered plant species. It works with over 2,000 botanical gardens in 153 countries to support plant-conservation projects.

This summer (May to August), the Oxford Botanic Garden is open daily from 9am to 6pm.

Address: Rose Lane, Oxford OX1 4AZ, tel: 01865 286 690, **www.botanic-garden.ox.ac.uk**

PRODUCTION:

ELIZABETH LASKAR.

PRODUCTION ASSISTANT:

PAMELA DANIELS.

STYLISTS: PAMELA

DANIELS & ELIZABETH

PHOTOGRAPHER:

MARCELLO CAPOTOSTI.

HAIR: LAUREL STAPLE USING

AVEDA. **MAKEUP:** MARIE

ANNE COULTER USING

AVEDA. **MODELS:** JAMIE

GAW, JANE BENYON, HOLLY

LEEDHAM, RUBY SANDHU

AND REBECCA OSAM.

GREEN SHOPPING GUIDE

Make every £1 you spend count



READER OFFERS

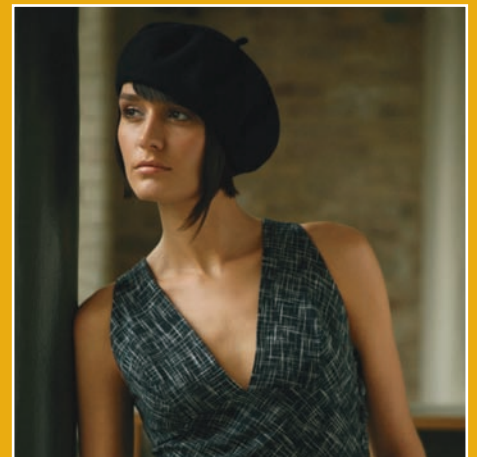
82 Lose your mail order virginity with Goodness Direct

86 Wastebusting worm composter

90 Win a £380 ethical summer wardrobe

92 Gorgeous hand cream from Earthbound Organics

94 No Excuse! Cloth Nappy trial pack





Easy Chair



Classic Extending Table with Classic Carvers and Dining Chairs



Lazy Chair



The Danish Oil Finish

ECO STYLE FROM ARBOR VETUM

Arbor Vetum is the UK's leading specialist in quality furniture with a conscience. Environmentally-friendly and ethically-lead, the Arbor Vetum range of garden and conservatory furniture combines beautiful reclaimed teak with sleek contemporary design and offers a realistic sustainable alternative to those looking to buy eco-friendly products without the rustic look.

Each piece is handcrafted from reclaimed teak – friendlier to the environment because it is made from carefully salvaged or recycled wood rather than living trees – and features solid timber with smooth, clean lines. The Arbor Vetum range includes tables in a variety of shapes and sizes, chairs for all occasions and sofas for both indoor and outdoor living.

Available at £550, the **Easy Chair** features a softly sculptured shape that will look beautifully at home in the most serene corners of your garden. Perfectly formed both in terms of comfort and eye-catching style, this chair will allow you to sit back and relax, helping you to escape the hustle bustle of everyday life and concentrate on a little “me” time.

As with all Arbor Vetum products, the Easy Chair carries the Forest Stewardship Council's 100% recycled label and is guaranteed to last you a lifetime. All Arbor Vetum furniture comes with a Natural Finish but, for an extra 10% it can be hand finished in Danish Oil, which gives the timber a darker, richer hue. And seat cushions are available in five attractive colourways: canvas, sea sand, spruce, navy and black.

Arbor Vetum is offering The Ecologist readers a 20% discount on all furniture, including the Easy Chair, until the end of May 2006. Simply call 0845 606 6818 and quote reference ECO/2 to receive your discount.

To see the whole range of products available with Arbor Vetum, please visit www.arborvetum.co.uk or call 0845 606 6818 for more details.

ARBOR  VETUM

Dear Reader

At the *Ecologist*, we have a vision of vibrant, self-sustaining communities, full of locally owned and supplied independent shops and businesses providing all of a community's diverse needs.

Yet today's reality is something altogether different. Chain stores and supermarkets are choking the life out of communities. Money, which once circulated within communities, now lines the pockets of distant head offices and shareholders. Where once there were towns and villages with unique identities, there are now identikit, one-size-fits-all high streets.

So what can we do?

First off, we all can make a difference by shopping from our local independents whenever we can. For those of us bereft of genuine local shops, use this guide to shop ethically via the web and bring us one step closer to the vibrant real communities we long for.

This guide has been carefully put together to include inspiring and independent producers and retailers who are committed to offering products and services that:

- are non toxic to you and the environment
- ensure highest standards of animal welfare
- support local communities
- offer a fair wage and decent working conditions to all parts of the supply chain
- use minimal packaging
- minimise transport miles.

Finally if you've already shopped at one of the retailers listed in this guide, tell us (gsg@theecologist.org), and them, what you think. If you're unhappy, don't move on silently. We need all the support we can get!



ADVERTISING IN THE ECOLOGIST... WHY BOTHR?

WE HAVE TESTIMONIALS TO PROVE IT.

'We are a family run natural health and beauty mail order company. What really surprised us was getting more new customers from the Ecologist's 400,000 readers than we did from national newspapers.'

– Damian,

www.beautynaturals.com

'The ad has proved fruitful and I have had at least 4 orders which I know came directly from the ecologist and thus paid for the advertising!!!! Yippee!'

– Jo Ordonez,

www.earthbound.co.uk

ADVERTISING RATES

| | |
|----------------------------|--------------------------------|
| Lineage | £2 per word |
| DISPLAY ADVERTISING | |
| 1/16 page | £125 [series of 10, £65 each] |
| 1/8 page | £275 [series of 10, £125 each] |
| 1/4 page | £375 [series of 10, £220 each] |
| 1/2 page | £700 [discounts negotiable] |
| Full page | £1,200 [discounts negotiable] |
| Double page spread | £2,200 |
| Inside front cover | £2,500 |
| Inside back cover | £1,500 |
| Outside back cover | £1,750 |

So if you are a small, independent producer or supplier of ethical products and services and want to reach 400,000 committed readers of the *Ecologist* call Zayda now on 020 7351 3578.

FOOD & DRINK

CONFESSIONS OF A MAIL ORDER VIRGIN

It was the Frozen Organic Sticky Toffee Pudding that did it. I had been flirting with the idea of ordering food online for weeks and had even created an account on the **Goodness Direct** website. With a full-time job and 9-month-old son I was facing chronic empty-cupboard

syndrome. At the same time, I like to support my local, independent shops whenever I can, and found it especially strange not to speak to the person I was buying food from. So I hadn't actually bought anything but was having fun filling my 'virtual' shopping

trolley. True, Goodness stocks all the dairy-free products for my son I had to search far and wide to find, and instead of aching shoulders from lugging all those heavy household items, I relished just having to click the mouse a few times. As I was teetering, it was great to go back to the site and find my shopping trolley exactly the way I left it. I then went through a mental checklist of my worries about buying food by mail order

not in' tab where I could choose from a list of instructions for the delivery person (leave at the door, bin, gate, porch, with a neighbour, the porter, etc).

Worry no.3. Would my frozen goods stay frozen?

Goodness Direct delivers frozen goods in special temperature-controlled packaging

Worry no.4 Would I be overcharged for delivery?

Since my order was over £35, I wasn't charged for delivery.

With my husband breathing down my neck about how our house has become a temple for healthy eating and that he was dangerously close to 'rebelling' with a McDonald's vanilla shake... I clicked on the 'Sweet Things' icons and then onto the Organic Toffee Pudding –and that was it. I had lost my mail order virginity.

Worry no.1 Will I be supporting an ethical business?

Goodness Direct is a co-operative, so its profits are invested back into the business and all employees – whether a forklift driver or a manager – are paid the same wages.

Worry no.2 What if I'm not in when they deliver?

I was relieved when at the 'checkout' I saw the 'If you're



ecologist READER OFFER

The Ecologist have teamed up with **Goodness Direct** to offer Ecologist readers 10% off all Goodness Direct's 5,000 products throughout the month of May. To redeem this offer simply go to www.goodnessdirect.co.uk and type in 'Ecologist' in the Voucher Code on the check out page.

Offer valid until May 31st, 2006

COULD YOU BE ONE OF 4 LUCKY READERS TO WIN A GOODNESS DIRECT HAMPER WORTH OVER £25

To enter the competition, send an email to info@goodnessdirect.co.uk with 'Ecologist competition' in the subject line. Competition closes May 31st, 2006. Four lucky winners will be chosen in a random draw on June 1st and will be contacted by email.



The pack includes: – Goodness Organic Long Grain Brown Rice (1kg), Goodness Organic Red Split Lentils (500g), Organico Organic Spaghetti (500g), Organico Organic Wholewheat Penne (500g), Meridian Organic Pasta Sauce with Spanish Olives (440g), Organico Milanese Pasta Sauce (360g), Quinoa Grain (500g), Alara Organic Muesli (500g), Biona Organic Clover Honey (340g), Crazy Jack Dried Organic Apricots (250g), Goodness Organic Brazil Nuts (100g), Goodness Organic Aduki Beans (500g), Goodness Organic Almonds (250g), Goodness Organic Oats (500g), Goodness Organic Sultanans (250g)

FRESH PRODUCE

Why not free yourself from the overly packaged, non-ripe and tasteless varieties of supermarket produce and visit one of the excellent online producers below? They will deliver their genuinely fresh, seasonal fruit, veg, fish and meat direct to your door. And you can feel safe in the knowledge that you're buying environmentally sound, locally sourced, delicious produce that meets the highest animal welfare standards.

FRUIT & VEGETABLES

Do you live near a farmers' market? For a list of farmers' markets around the country go to www.theecologist.org/farmersmarket. Along with greengrocers, farmers' markets are a great source for locally produced, fresh, seasonal fruit and veg. If, however, you don't live near a greengrocer or farmers' market, the next best way to get your fruit and veg is to sign up for a local box scheme. For 15 reasons to join one, and a list of suppliers throughout the UK, go to www.theecologist.org/boxscheme

ORGANIC BEEF, LAMB, PORK & POULTRY

No local butcher? Reliant on heavily processed, packaged and factory-reared supermarket meat? Find out what meat should really taste like – order your next steak online . . .

Graig Farm Organics

www.graigfarm.co.uk

Higher Hacknell Farm

www.higherhacknell.co.uk

Sheepdrove Organic Farm

www.sheepdrove.com

The Real Meat Company

www.realmeat.co.uk

Well Hung Meat

www.wellhungmeat.com



How can I be sure my meat will arrive

fresh? Fresh meat and fish is carefully wrapped in insulated boxes with ice packs, ensuring that frozen goods stay frozen and chilled items stay chilled.



What happens if my delivery arrives and I'm not in?

Carriers can be instructed to leave your delivery in a safe place, with a neighbour, or at a local shop. The companies listed in this guide will do their utmost to cater to your specific needs – if you are not at home – please do let them know and alternative arrangements can be made.

FRESH FISH

No local fishmonger? Want your omega-3 fatty acids without further endangering chronically depleted fish stocks? Have your sustainably caught / reared fish delivered to your door.

Inverawe Smokehouses

www.smokedsalmon.co.uk

The Organic Smokehouse

www.organicSmokehouse.com

Deverill Trout Farm

www.purelyorganic.co.uk

Graig Farm Organics

www.graigfarm.co.uk

may in season



VEGETABLES:

Asian greens: *Wok brocc, red orache, perilla, Chinese celery, mizuna greens, mibuna greens*

Aubergines

Asparagus

Cauliflower

Lettuce: *The following varieties are available*

fresh in May: Attrazione, buttercrunch, roxy, Vienna, amorina, Bergamo, oakleaf, Aruba, salad bowl (red and green), red fire, fristina

Mushrooms:

Pavement Mushroom, Brown Cap / Chesnut / Paris, the Blusher, Agrocybe Cylindrica, Pholiota Mutabilis, Jew's ear, chicken of the woods, fairy-ring Champignon, morel, St George's

Radishes

Spinach

Spring greens: *Wintergreen, pixie, spring hero*

Spring onions

Watercress

FRUIT:

Rhubarb





STORE CUPBOARD ESSENTIALS

Faced with your weekly box of fresh produce, all you'll need to make a huge number of delicious recipes is a well-stocked store cupboard. What could be more convenient than having these 'essentials' delivered topped-up once a month from one of these excellent online ethical general stores.

Graig Farm

www.graigfarm.co.uk

Goodness Direct

www.goodnessdirect.co.uk

Hider

www.hider-foods.co.uk

Naturally Good Food Ltd

www.goodfooddelivery.co.uk

Real Food Direct

www.realfooddirect.co.uk

Traidcraft Plc

www.traidcraft.co.uk

BASIC INGREDIENTS

- ✓ Baking powder
- ✓ Beans
- ✓ Cocoa
- ✓ Flour
- ✓ Herbs
- ✓ Honey
- ✓ Ketchup
- ✓ Lentils
- ✓ Mayonnaise
- ✓ Mustard
- ✓ Oats
- ✓ Olive oil
- ✓ Pasta
- ✓ Pepper
- ✓ Rice
- ✓ Salt
- ✓ Spices
- ✓ Stock cubes
- ✓ Sugar



ECOLOGIST ACTION FOOD-BUYING GROUPS

Why not club together with a bunch of friends and form a food-buying group – and save huge amounts of money on good, local, organic 'essentials'. To set one up see www.theecologist.org/foodbuyinggroups. The wholesalers listed below supply a comprehensive range of ethically produced and organic 'storecupboard essentials'.

Clearspring

www.clearspring.co.uk

Community Foods

www.communityfoods.co.uk

Eostre

www.eostreorganics.co.uk

Essential Trading

www.essential-trading.coop

Organico

www.organico.co.uk

Suma

www.suma.co.uk



CRAZY JACK READY TO EAT APRICOTS 250G

Apricots the first organic ready to eat apricots in the UK, developed from scratch and underwritten by Crazy Jack and Community foods to ensure a market for these unusual naturally dark, but delicious fruits. NO Sulphur or any other preservatives means you taste the apricot and are suitable for anyone intolerant to sulphites.

Try it and taste the difference yourself

Find out more at www.crazyjack.co.uk and www.communityfoods.co.uk

Crazy about food, serious about the planet



fairtrade coffee beans

DRINK

BEERS, ALES & CIDER

Beers in a Box

www.beersinabox.com

Black Isle Organic Beers

www.blackislebrewery.com

Broughton Ales

www.broughtonales.co.uk

SPIRITS

Juniper Green Organic Gin

www.junipergreen.org

Stonelink Farm (organic sloe gin)

www.stonelinkfarm.co.uk

COFFEE

A Lot of Coffee

www.alotofcoffee.co.uk

Café Direct

www.cafedirect.co.uk

Equal Exchange

www.equalexchange.com

Origin

www.origincoffee.co.uk

The Bean Shop

www.thebeanshop.com

Dunkerton's Cider and Perry

www.orchard-hive-and-vine.co.uk

Freedom Organic Beer

www.freedombeer.com

WINE

Festival Wines

www.festivalwines.co.uk

Pure Wine

www.purewine.co.uk

Vinceremos

www.vinceremos.co.uk

Vintage Roots

www.vintageroots.co.uk



Independent wine merchant specializing in great quality, sustainable wines. Biodynamic and Organic wines delivered next day, no minimum order.

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www.festivalwines.co.uk

tel: 0800 024 2969

post: PO Box 5088, Hove, BN3 3JE

To join the Ecologist's Organic & Biodynamic Wine Club go to page 73



Sheepdrove Organic Farm

Sheepdrove is a 2,000 acre traditional mixed farm, where crops and livestock are cultivated and reared naturally, without GMOs, artificial fertilizers and pesticides, growth-promoting hormones or routine antibiotics.

ORGANIC Beef, Lamb, Mutton, Pork, Chicken & Meat Boxes

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Call 01488 674747 or visit www.sheepdrove.com

Sheepdrove Organic Farm, Lambourn, Berkshire RG17 7UU Email: sales@sheepdrove.com

HOME & GARDEN

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BUILDING & MAINTENANCE

DIY ESSENTIALS

Building materials, flooring, insulation, paints and windows & doors

Construction Resources

www.constructionresources.com

Ecomerchant

www.ecomerchant.co.uk

Green Building Store

www.greenbuildingstore.co.uk

The Green Shop

www.thegreenshop.co.uk

The Healthy House

www.healthy-house.co.uk

Nigel's Eco Store

www.theinsightecostore.com

CONSTRUCTION/RENOVATION

Cob in Cornwall

www.cobincornwall.com

Concept Timber

www.concept-timber.co.uk

Finch Macintosh Architects

www.finchmacintosh.co.uk

Gale and Snowden

www.ecodesign.co.uk

Insideout Buildings

www.iobuild.co.uk

Nicholas Hare

www.nicholashare.co.uk

Mike Wye and Associates

www.mikewye.co.uk

Quattro Design

www.quattrodesign.co.uk

PAINTS

Auro Organic Paints

www.auro.co.uk

Earth Born Paints

www.earthbornpaints.co.uk

Ecomerchant

www.ecomerchant.co.uk

Ecopaints

www.ecopaints.co.uk

Eco Solutions Ltd

www.ecosolutions.co.uk

Nutshell Natural Paints

www.nutshellpaints.com

The Green Shop

www.greenshop.co.uk

TILES

Natural Tile

www.naturaltile.co.uk

Siesta Cork Tile Co

www.siestacorktiles.co.uk

TIMBER

Altham Hardwood Centre

www.oak-beams.co.uk

Victorian Wood Works

www.victorianwoodworks.co.uk

WOOD FLOORING

Treework Flooring

www.treeworkflooring.co.uk

green building store

sustainable building products

mail order & online

timber windows and doors

super-efficient glazing

new range of aluminium-clad timber windows and doors

natural paints

timber finishes

paint strippers

timber preservatives

garden timber treatments

ultra-efficient WCs

bathrooms

water-saving fittings

natural insulation

steel rainwater drainage

and more. . .

At Green Building Store we only sell building products which promote healthy, environment-friendly homes. Whether you are redecorating, building or refurbishing we can help you do it safely and sustainably.



- EcoPlus System. High performance timber windows, doors and conservatories, with a unique environmental specification.
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- The Natural Paint Collection.* Natural ingredients; healthy, effective paints and woodfinishes.
- Lindab rainwater drainage system. The solid steel alternative to PVC guttering.

* Some products contain some non-natural ingredients.



To find out more, visit our website or call our sales team:

www.greenbuildingstore.co.uk
01484 854898



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- biodynamic & organic cleaning products - Sonett
- Demeter certified & natural skin care range - Tautropfen



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Totnes TQ9 5ZZ
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INTERIORS

BEDDING & LINEN

- Albatross**
www.albatross-global.com
- Green Fibres**
www.greenfibres.com
- Schmidt Natural Clothing**
www.naturalclothing.co.uk

FURNITURE NEW

- Arbor Vetum**
www.arborvetum.co.uk
- Rawnsley Woodland Products**
www.cornishwoodland.co.uk

RECYCLED & SALVAGED

- Reclaimed Pine Online**
www.reclaimed-pine-online.co.uk
- Treesave Reclamation Ltd**
www.buresreclamation.co.uk
- Viking Reclamation**
www.reclaimed.co.uk

CLEANING PRODUCTS

- Ecotopia**
www.ecotopia.co.uk
- Ecover**
www.ecover.com
- Greenlands**
www.greenlands-env.co.uk
- Natural Collection**
www.naturalcollection.com
- Vertue**
www.vertue.com



WATER

CONSERVATION

- Eco Logic**
www.ecologicuk.com
- Hippo the Water Saver**
www.hippo-the-watersaver.co.uk
- Tap Magic**
www.tapmagic.co.uk

PURIFICATION

- Earthly Goods**
www.earthlygoodsgroup.co.uk
- Pure H2O**
www.pureh2o.co.uk
- Simply Water**
www.simplywater.com

RAINWATER HARVESTING

- Centre for Alternative Technology**
www.cat.org.uk
- Envireau Rainwater Management**
www.envireau.co.uk
- Free Rain**
www.freerain.co.uk
- Rainharvesting systems**
www.rainharvesting.co.uk



HOME ENERGY

ELECTRICITY

RENEWABLE ENERGY TECHNOLOGIES

(wind, hydro, solar PV)

Dulas Ltd

www.renewable-resources.com

HiTech Energy Ltd

www.hitechenergy.co.uk

Wind and Sun Ltd

www.windandsun.co.uk

LIGHT BULBS

Energy Saving World

www.energysavingworld.co.uk

Energy Savers Direct

www.energysavers-direct.com

Nigel's Eco Store

www.theinsightecostore.com

SUPPLIERS

Ecotricity

www.ecotricity.co.uk

WOOD FUEL STOVES

Chilli Penguin Stoves

www.chillipenguin.co.uk

Ebc wood fuels

www.ebc-ecofuel.co.uk

Rural Energy Ltd

www.ruralenergy.co.uk

Wood Energy Ltd

www.woodenergyltd.co.uk

SOLAR WATER PANELS

Solar Twin

www.solartwin.com

Sustainable Energy

Installations

www.sustainable-energy.org.uk

INSULATION

Second Nature

www.secondnatureuk.com

GROUND SOURCE HEAT PUMPS

Conservation

Engineering Ltd

www.heating-designs.co.uk

Eco Heat Pumps

www.ecoheatpumps.co.uk

Geothermal Heating

International

www.geoheat.co.uk

Green Systems

www.greensystems.net

Groenholland UK Ltd

www.groenholland.com

Ice energy

www.iceenergy.co.uk

Kensa Engineering Ltd

www.kensaengineering.com

Powertech Solar

www.powertech-solar.com



GARDEN

GARDEN ESSENTIALS *Compost & wormeries, garden furniture, pest & weed control, seeds, soil and plant care.*

British Eco

www.britisheco.com

Green Gardener

www.greengardener.co.uk

The Organic Gardening Catalogue

www.OrganicCatalogue.com

Tamar Organics

www.tamarorganics.co.uk

The Natural Collection

www.naturalcollection.com

NURSERIES

Ryton Organic Gardens

www.hdra.org.uk

Landlife Wildflowers

www.wildflower.org.uk

National Wildflower Centre

www.nwc.org.uk

FURNITURE & FENCING

English Hurdle

www.hurdle.co.uk

Forest Stewardship Council

www.fsc-uk.info

Pendlewood

www.pendlewood.com

Wilderness Wood

www.wildernesswood.co.uk

SEEDS EXCHANGE

Flora Locale

www.floralocale.org

Henry Doubleday Research Association

www.hdra.org.uk

SUPPLIERS

Kokopelli Seeds

www.organicseedsonline.com

EcoSeeds

www.ecoseeds.co.uk

Tamar Organics

www.tamarorganics.co.uk

The Real Seed Catalogue

www.realseeds.co.uk

FERTILISERS

Enviromulch

www.wbpenviromulch.com

Fertile Fibre

www.fertilefibre.co.uk

Rooster Pelleted Manure

www.rooster.uk.com



CLOTHING



WIN A £380 ETHICAL SUMMER WARDROBE

Think!clothing in association with the *Ecologist* is offering one lucky reader the chance to win 5 gorgeous designs by Jane Farwell.

*Dress, trousers, skirt, shirt and top. Available in black, white or pink and in sizes 10 to 16.

■ To enter the competition, send an email to jane@thinkfairtrade.com with 'Ecologist competition' in the subject line. In no more than 100 words say what you'd like to change about the fashion world and why. **Closing date is 31st May. The winner will be contacted by email.**

Think!clothing is made from cotton khadi (traditional Indian handloom fabric) and woven on traditional handlooms by a Fair Trade organisation in Tamil Nadu, southern India. www.thinkfairtrade.com



terramar.co.uk *terramar organics*
 fair trade, organic clothing
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 and more...
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www.inbi-hemp.co.uk

Want to look good, but don't want to support sweatshops, pesticide abuse or dull brands? Then these online clothing retailers are for you. All stock a range of well-made, stylish and ethical clothes. Precise sizing charts make it easy to find the right size for you – and if it doesn't fit, or you don't like it, simply return it.

CLOTHING DESIGNERS

50/50

www.5050clothing.com

Enamore

www.enamore.co.uk

Junky Styling

www.junkystyling.co.uk

Keep and Share

www.keepandshare.co.uk

Natural Dye Company

www.naturaldyecompany.com

Natural Store

www.thenaturalstore.co.uk

Pachacuti

www.pachacuti.co.uk

Pierre Garroudi

www.pierregarroudi.com

Romp

www.romp.uk.com

Sari

www.saricouture.com

MEN & WOMEN'S CASUALWEAR

Bishopston Trad. Comp

www.bishopstontrading.co.uk

Green apple

www.the-green-apple.co.uk

Green Fibres

www.greenfibres.co.uk

Howies

www.howies.co.uk

Natural Collection

www.naturalcollection.com

People Tree

www.ptree.co.uk

Seasalt

www.seasaltorganic.co.uk

Schmidt Natural Clothing

www.naturalclothing.co.uk

Terramar

www.terramar.co.uk

SHOES

Beyond skin

www.beyondskin.co.uk

Birkenstock

www.birkenstock.com

Black Spot Sneakers

www.adbusters.org

Fair Deal Trading

www.fairdealtrading.co.uk

Freerangers

www.freerangers.co.uk

Green Shoes

www.greenshoes.co.uk

Terraplana

www.terraplana.com

The Natural Shoe Store

www.thenaturalshoestore.com

Vegetarian Shoes

www.vegetarian-shoes.co.uk

SLOGAN T-SHIRTS

Equop

www.equop.com

Funky Gandhi

www.funkygandhi.com

Icons Incorporated

www.icons-incorporated.com

Pakucho

www.pakucho.co.uk

Soliloquy Clothing

www.soliloquyclothing.com

THTC

www.thtc.co.uk

Tonic T-Shirts

www.tonicshirts.com

SPORTSWEAR

Epona

www.eponasport.com

Gossypium

www.gossypium.co.uk

Zoozoo2

www.zoozoo2.com

ORGANIC JEANS

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www.kuyichi.com

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Design Africa

www.artworksforafrica.com

Ganesha

www.ganesha.co.uk

Matt and Nat

www.mattandnat.com

VoodooBlue

www.voodooblue.co.uk

Smart Tart

www.smarttart.co.uk

Refab

www.refab.co.uk

Suitcase

www.suitcase-london.com

Tree 2 My Door

www.tree2mydoor.com

www.pakucho.co.uk



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www.jungleberry.co.uk

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and FairTrade
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- Organic underwear & sleepwear for children & adults
- Organic blankets, bedlinens, towels & soft toys

DON'T PANIC – IT'S ORGANIC

Natural bodycare and cosmetic products are just as effective as their conventional counterparts, but because they don't rely on plastics, synthetic colours and chemicals preservatives, you will find that their range, application and usage can be different. Here's what to bear in mind when using natural products:

Natural cosmetics

- Lip glosses are safer than lipsticks because they contain less potentially toxic colour, but they won't last as long because they don't contain plastics and film formers
- Mascaras won't dry as quickly, lengthen or be waterproof like conventional mascaras because they don't contain synthetic fibres or plastics
- Eye shadows will come in a more limited range of 'earth' colours because they will be based on a pallet of mineral and plant dyes
- Choose cream blush instead of powders to avoid potentially cancer-causing talc
- Avoid sparkly make-up which can contain ecologically unsound mica

Natural bodycare products

- Choose moisturisers based on single oils (plant or animal based) rather than complex mixtures of oil, water, preservatives and film forming ingredients. These may feel more oily on your skin at first but will be fully absorbed fairly quickly.
- Natural toothpastes should be fluoride-free and won't foam as much as conventional ones because they won't contain detergents like sodium lauryl sulphate.

BODYCARE & COSMETICS

EARTHBOUND ORGANICS

Earthbound Organic's Comfrey Hand Cream varies in colour from batch to batch. Because bees harvest on different plants throughout the year, 'The beeswax goes from being bright yellow to chocolate brown from one season to the next' owner Jo Ordonez says.

The comfrey, plantain (healing) and marshmallow (softening) are hand picked from Jo's own garden. The herbs are immersed in jars of cold pressed sunflower oil and left on Jo's kitchen windowsill facing the sun. After about 8 weeks, the oil has taken on the perfume and colour of the herbs. She drains the oil using a muslin bag, and, over a low heat, mixes it with a block of hard beeswax (skin protectant), sourced from a local Welsh beekeeper.

She follows her instincts to get the texture of her hand cream just right. 'If there's too much water the ingredients separate; not enough and it comes out as a very heavy, oily

cream', she says. Finally, she adds the essential oils – lavender and rosewater.

A typical batch will take a day to make and produce about 50 jars of cream. As the hand cream doesn't contain parabens, they'll keep for up to a year.



ECOLOGIST 2-for-1 READER OFFER

Jo is offering a free 15-gram travel size Mint Foot Cream (worth £3.20) when you buy a 50-gram Comfrey Hand Cream for £6.95. The mint foot cream will relieve tired feet and cracked heels. To redeem this offer simply call **01597 851 197** or email **sales@earthbound.co.uk** quoting 'Ecologist reader offer'. Offer valid until 31/05/06

To see Jo's range of moisturisers, toners, cleansers, oils and soaps go to **www.earthbound.co.uk**



Jo's workshop



Comfrey



Mint

BODYCARE ESSENTIALS

ASPIRE TO LESS –The best way to ensure healthy skin is to maintain a healthy diet, get enough sleep and keep stress levels low. If you do buy products for your face or body, try to make sure they are based on natural ingredients. The companies listed below carry products that have not been tested on animals; they contain no parabens, no petrochemicals and no synthetic ingredients. Product lines include cosmetics, deodorants, men’s products, skin, bath and body care.

Barefoot Botanicals
www.barefoot-botanicals.com
Earthbound Organics
www.earthbound.co.uk
My Being Well
www.mybeingwell.com

Pure Nuff Stuff
www.purenuffstuff.co.uk
The Organic Pharmacy
www.theorganicpharmacy.com
Pure Skin Care
www.pureskincare.co.uk

SANITARY PRODUCTS

Natracare
www.natracare.com
Menses
www.menses.co.uk
The Mooncup
www.mooncup.co.uk



ECOLOGIST ACTION

MAKE YOUR OWN

Everyone’s skin is different, so why not make your own bodycare products and cosmetics at home to suit your needs? The websites listed below will help guide you through ingredients that work for your skin and hair type, and offer a range of ideas for customising your favourite natural scents.

Aromatic
www.aromatic.co.uk
Bay House Aromatics
www.bay-house.co.uk
Cosmetics at Home
www.cosmeticsathome.co.uk

New Directions
www.newdirectionsuk.com
The Soap Tub
www.meltsandpoursupplies.com

DON’T KNOW YOUR GLYCERYL LAURATE FROM YOUR DECYL GLUCOSE?

Find out what the words in your bodycare products really mean....

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Past features by Ecologist Health Editor, Pat Thomas, include:
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Nivea moisturiser
Clairol Nice ‘n Easy Hair Dye
Radox Herbal Bath with Juniper
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Revital
www.revital.com

The Organic Health Shop
www.baughdell.co.uk





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the mission

The amount of baby gear we purchase in the name of 'good' parenting- nappies, wipes, bottles, car seats, pushchairs, clothes, shoes, toys and other nursery items - is staggering. Given the ongoing expense of raising a child and the heavy competition that exists between different manufacturers for parents' custom, it's little wonder that many of the most common baby and child accessories have been made in sweatshops using chemicals that harm both our children's health and the environment.

THIS IS NOT ACCEPTABLE

We challenge the **BABY & CHILD** industry to make products with:

- No potential carcinogens, neurotoxins and reproductive toxins
- No artificial additives, colourings or perfumes
- No petrochemicals
- No synthetic fibres
- Minimal packaging
- Organic ingredients
- Stop marketing to children under 16 years old

What we can do as consumers

- Read and understand the label
- Buy fewer products
- Buy reusable products, eg cloth nappies
- Make our own, eg food
- Challenge stockists to sell safer products
- Support the small, independent and ethical producers and retailers in these listings.

BABY & CHILD

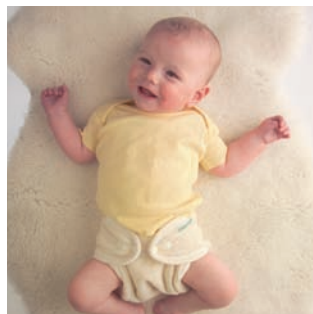
Why use disposables when cloth nappies are easy to use, easy to clean and best for your baby?



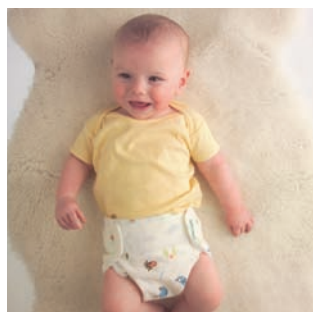
1 Lay open baby-shaped cotton nappy



2 Place flushable liner on top for easy removal of poo



3 Close using adjustable poppers



4 Add the waterproof wrap

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www.littleearthlings.com

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www.naturalcollection.com

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Natural Child

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www.tattybumpkin.com

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- Behind the Label: Ultra Soft Wet Ones with Camomile Extract
- The Dawn of the Domestic Superbug – The damaging household cleaners all mothers should know about

Go to www.theecologist.org/baby



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CHICKENOWSKI'S CHICKEN

BY EDWARD GOLDSMITH

An announcement has rocked the business world and provided yet further proof of the infinite capacities of modern technology.

Professor Milton K. Chickenowski of Nuneaton University has developed (with the aid of a generous grant from the National Research Council) a solid-state electromechanical chicken.

Chickenowski's chicken (as it is familiarly known in the Nuneaton Laboratories) is programmed by means of a £1 million RB211 Honeywell Computer (an integral part of the device) to lay eggs with the following choice of characteristics:

Shapes: 4 possibilities – flat for sandwiches; square for easy packing; oval for traditionalists; and chicken-shaped for fancy food stores.

Contents: 5 possibilities – yolk and white in equal parts, arranged in layers for convenience; white only (standard or aerosol-white for meringues and souffles); yolk only; either soft-boiled or hard-boiled (regardless of cooking time).

This remarkable device, once programmed, can be operated by a single unskilled man, and requires routine servicing no more than once a month by personnel with easily acquired mechanical and electronic know-how. Is this science-fiction?

No. Chickenowski's chickens are being invented every day – that is what progress is all about. Yet is it really progress? It is held up to be so, simply because of its economic advantages. But a little thought will make it apparent that these are quite illusory.

First of all, a real chicken reproduces itself: once you buy a couple, you need never buy any more. Chickenowski's chicken is sterile: it can last a few years – to be generous, let us say ten – then you simply have to buy another. The longer the period over which you calculate your costs, the more uneconomic does it appear: over 100 years it costs proportionately 10 times more than a real chicken, over 1000, a hundred times more, etc.

Secondly, the real chicken grows by absorbing food available in the field where it lives, or should live. Chickenowski's chicken is made, with the aid of fossil fuels, from all sorts of mechanical and electronic components, in turn made from metals, all of which have to be extracted from deep down in the earth's crust – leaving scarred and derelict land where once were virgin forests. These resources have to be shipped across the seas, refined in vast factories, and used for making the appropriate components,

which must then be assembled. At each step, wastes are produced – some of them very toxic – and these are dumped into our rivers and seas or allowed to contaminate the air in the form of poisonous gases. By contrast, the wastes produced by a real chicken serve as essential organic manure, without which crops could not thrive and people would be less well nourished.

Apart from this, the food the chicken feeds on is self renewing, while the metals required to make Chickenowski's chicken and the fuel needed to power it are not: and what is more, the world's stock is fast running out. As our economy is entirely geared to the short term, the commercial prices for these resources simply reflect the relationship between the immediate demand and the supply. If it were to reflect that between the long-term demand and the long-term supply, prices would be very much higher.

Apart from this, by allowing Chickenowski's chicken to replace a real one, we are forcing people who once led a pleasant healthy life in a stable rural community, looking after real chickens, to lead an unpleasant and unhealthy life in the urban wastelands where Chickenowski's chickens tend to be made.

In addition, it is presumptuous to suppose that the synthetic eggs laid by Chickenowski's chicken will provide as sound a diet as those to which we have been adapted by millions of years of evolution.

If Chickenowski's chicken is regarded as economic, it is only that our economists are working in a vacuum and that, in their calculations, they have failed to take into account all those costs which are conventionally regarded as falling outside the compass of their pathetically inadequate discipline.

If these costs were taken into account, it would become quite apparent that Chickenowski's chicken is totally uneconomic, and that its introduction, rather than constitute progress, is a significant step in the march of regress to which our industrial culture is ever further committing us.

Our economists are, in the next few years, going to be totally discredited, unless they begin to understand that a nation's wealth cannot be increased by the short-term gimmickry of modern science and technology, but only by observing sound ecological principles.

They must realise too that there is no rivalry between ecology and a realistic economics; only between ecology and modern economics.

Ecologist editorial, September 1971
www.edwardgoldsmith.org

You know climate change is happening ...but what can you do to help?



ecotricity

What is ecotricity?

See 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.]

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