

In their early years children are knowledge junkies, questioning everything in their view, though exhibiting little skepticism. Most never learn to distinguish between inquisitiveness and credulity. Those who do either come to a bad end or become professional skeptics.

Michael Shermer

The forgotten history of gonorrhoea

Superstition survey

Darwin Day

Book donation to schools

Skeptic

new zealand

number 90 - summer 2009

www.skeptics.org.nz

History denied is history repeated	3
Superstitious? Me? That depends	3
Newsfront	10
Forum	14
Darwin Day events	15
Hokum Locum	16
Testing time for Squidmas cake	18
'Oddzone donated to 600 NZ schools	19
Magic for mosquitoes	19

ISSN - 1172-062X

Contributions

Contributions are welcome and should be sent to:

David Riddell
122 Woodlands Rd
RD1 Hamilton
Email: number8@ihug.co.nz

**Deadline for next issue:
March 10 2009**

Letters for the Forum may be edited as space requires - up to 250 words is preferred. Please indicate the publication and date of all clippings for the Newsfront.

Material supplied by email or CD is appreciated.

Permission is given to other non-profit skeptical organisations to reprint material from this publication provided the author and NZ Skeptic are acknowledged.

Opinions expressed in the New Zealand Skeptic are those of the individual authors and do not necessarily represent the views of NZ Skeptics (Inc.) or its officers.

Subscription details are available from www.skeptics.org.nz or PO Box 29-492, Christchurch.

A good excuse for a party

FEBRUARY 12 is Charles Darwin's 200th birthday, and the old guy, or at least his ideas, are still in pretty good shape. While evolutionary theory has been broadened and elaborated extensively in the 150 years since *The Origin of Species* was published in 1859, Darwin's fundamental concept of natural selection remains central to our understanding of life's diversity.

New Scientist noted that 2009 is also the 400th anniversary of Galileo's first use of the telescope, and used this as an excuse to ask a panel of eight whether Galileo or Darwin had done more to knock man off his pedestal. Opinion was divided, but Darwin was favoured by a small majority. One comment in the introduction by Michael Brooks was that Galileo has had more impact in the long term. His rationale for saying this was that far more people believe the Earth goes round the sun than believe people are descended from animals via natural selection, with the figures in the US being 80 percent and 50 percent respectively.

Perhaps this is just a reflection of the greater length of time people have had to get used to Galileo (it's alarming that 20 percent are still unsure the Earth goes round the sun...), but I suspect it's an indication of just how disturbing many people still find the idea of evolution. It's not that Darwin's ideas have had less impact, but rather that their impact is so severe that many respond with denial.

This morning I started reading *The Making of the Fittest* by Sean Carroll. Just as DNA can definitively determine paternity in custody cases, Carroll writes, so too can it show the 'paternity' of entire species, establishing patterns of evolution beyond any reasonable doubt. Genetic research is illuminating, and being illuminated by evolutionary theory in ways that were unthinkable 30 years ago. Yet while US citizens are entirely supportive of DNA's applications in the courtroom, many remain uncomfortable with the philosophical implications of DNA research. The same applies to a lesser extent in this country.

So wherever you are on 12 February, raise a glass to Charles Darwin. His life is certainly a thing to celebrate. To mark the occasion, there are numerous events occurring around the country – see page 15. If you can't get to one of these, have some skeptical friends round for a Darwinian dinner, or head off to the pub with them for a quiet toast to the father of modern biology. Anniversaries like this one don't come around too often.

David

History denied is history repeated

Felicity Goodyear-Smith

Today, gonorrhoea infections in young girls are taken as certain evidence of sexual abuse. Yet there is an extensive but now-forgotten literature showing that this is not necessarily the case. This article is based on a presentation to the NZ Skeptics 2008 conference in Hamilton, September 26-28.

In 2006 I was asked for my forensic opinion in a case involving a 13 month old Pacific Island girl, Lana,^{1*} found to have a gonorrhoeal infection of her vagina and vaginal lips. Her 19-year-old mother and 20-year-old father had also tested positive for gonorrhoea. Her father had acquired this infection through having an affair when Lana was aged 10 months. Both parents had noticed they had a discharge but had not sought treatment, but when Lana developed symptoms they took her to their GP. Once gonorrhoea was diagnosed, it was immediately decided that either her mother or her father must have sexually abused her and she was taken into foster care.

The parents denied any abuse. They lived in an extended family household, shared a room, bed, and towels, sometimes bathed together, and the mother would use her sarong as a nappy when she ran out of disposables. They accepted that they must have been the source of Lana's infection, but denied

any sexual contact and said that she must have acquired the infection through contamination. They were battling in the Family Court to get their daughter back. The doctors for Child Youth and Family (CYF) insisted that gonorrhoea can only be transmitted by "mucous membrane to mucous membrane" and that gonorrhoea infection in a child under the age of puberty (ruling out vertical transmission when a newborn baby acquires the infec-

tion gonorrhoea was exclusively a sexually transmitted disease. Experts in the field, both in New Zealand (such as Auckland paediatrician Patrick Kelly) and internationally (for example Margaret Hammerschlag and Nancy Kellogg in the USA) say that gonorrhoea in a child, other than a newborn, is presumptive evidence of sexual abuse.

Various international guidelines indicate that gonorrhoea in pre-pubertal children is nearly always a sexually transmitted disease, although the possibility on non-sexual transmission is not conclusively excluded. In the US Committee on Child Abuse & Neglect (American Association of Paediatricians, 2005), gonorrhoea is said to be diagnostic of sexual abuse "if not

perinatally acquired and rare nonsexual vertical transmission is excluded" and a positive culture for *Neisseria gonorrhoeae* makes "the diagnosis of sexual abuse a near medical certainty". The UK National guideline for the management of suspected sexually transmitted infections in children and young people



In the 19th and early 20th centuries epidemics of non-sexually transmitted gonorrhoea were recognised as a major problem in orphanages.

tion at delivery from the birth canal of an infected mother) is considered diagnostic of sexual abuse.

I was therefore asked by the parents' lawyer whether gonorrhoea can be transmitted non-sexually in pre-pubertal children after the newborn period. In my

1 * Not her real name

(2003) states that "The bulk of evidence strongly suggests that gonorrhoea in young people over one year is sexually transmitted and the isolation of a gonococcal infection is highly suggestive of sexual abuse".

Certainly there is no doubt that children as well as adults can and do contract gonorrhoea from sexual contact and sexual abuse. I agreed to conduct a systematic literature review to establish whether there is evidence on the possible non-sexual transmission of *N. gonorrhoeae* in children after the neonatal period. After some months, having accessed and read several hundred papers, it was apparent that there is overwhelming evidence of thousands of reported instances of possible, probable and definite non-sexual transmission of gonorrhoea.

Results of the literature review

The bacteria which causes this infection, *N. gonorrhoeae*, will grow at temperatures between 25 and 39 degrees Celsius. It is killed by heat (five minutes at 55 degrees) and dies quickly if dried, but thrives in warm humid conditions. It grows on the mucous membranes of the body and hence can infect the mouth, throat, conjunctiva of the eyes, the urethra, anal canal and cervix. Pre-pubertal girls (but not adult women) are susceptible to infection of the vagina and vaginal lips (vulvovaginitis). The mucous membrane of a young girl's vagina is more delicate than that of an adolescent or adult because of lack of oestrogen and it has a neutral pH which renders it an excellent culture medium for the bacteria.

Survival on inanimate objects

Studies have been conducted where various objects are contaminated with the organism and then attempts made to culture it after periods of time. It has been recovered and grown from

... there is overwhelming evidence of thousands of reported instances of possible, probable and definite non-sexual transmission of gonorrhoea.

a variety of surfaces including paper, swabs, fabric, rubber, wood, glass and condom after a number of hours, and has been grown from infected bathwater after 24 hours. It can live in pus on towels and other fabric for hours or days. Studies of toilet seats have found that these are unlikely to be sources of infection. Gonorrhoea was not grown in a study of random swabs of public toilet seats. When seats were inoculated with the bacteria, it died within 10 minutes if dried, although it could be grown from pus on the seat after two to three hours.

People are at greater risk from contaminated toilet paper rather than toilet seats. There is one case study of an eight-year-old Australian girl who travelled for 72 hours on a plane from Russia to Sydney. The toilets were very dirty and the girl, instructed by her mother, wiped the seat with toilet paper before using it. A few days after arriving in Australia she developed a gonococcal infection. Despite extensive questioning she remained adamant that she had never been subjected

to any sexual contact and it was presumed that she had probably contracted the infection from self-inoculation, wiping herself with contaminated fingers.

Accidental transmissions

The literature contains a number of examples of accidental transmission. The three-year-old son of a laboratory technician was left in the car while his mother shopped, ate infected chocolate agar from a culture plate and subsequently developed gonorrhoea of the throat. Laboratory technicians have developed cases of infected eyes (conjunctivitis) from being struck in the eye with the strap of an infected face mask, and from accidentally spraying their face and eyes with infected fluid. There is an unusual cultural practice of Filipinos using their own urine as an eyewash, and a case series is reported of 13 men with genital gonorrhoea who inadvertently gave themselves gonorrhoeal infection in their eyes. Another case of indirect transmission is of a soldier immobilised in bed for many weeks with fractured legs who acquired urethral gonorrhoea from sharing a urinal bottle with an infected patient in the next bed. An even more bizarre case is one of a sea captain acquiring gonorrhoea from using an inflatable sex doll belonging to the chief engineer who had contracted the infection in a previous port.

Epidemics of conjunctivitis

Large-scale epidemics of gonorrhoeal infections, largely affecting the eyes, are reported in communities where there are overcrowded conditions

in substandard housing, insufficient water supply with poor sanitation, inadequate hygiene and a high fly density. Such epidemics are prevalent in parts of rural Africa and outback Australia. For example in 1988 an epidemic involving over 9000 cases over an eight-month period was reported in a district in Ethiopia. Most of those infected were children aged under five years, with no concurrent genital outbreak in the adult population. Similar epidemics of gonococcal conjunctivitis have been reported in Aboriginal communities in outback Australia throughout the 1980s and 1990s. Those affected are predominantly children, most under five years of age. A prospective study of 432 cases in one epidemic in 1991 found that risk factors for infection were being aged under five years and having unwashed hands and faces. Although not definitively demonstrated, it appears likely that flies act as vectors of the disease in these African and Australian outbreaks.

Epidemics of gonorrhoea in children's hospitals and orphanages

What my review uncovered through successive hand-searching of the references of various papers was a large body of academic literature published between the 1880s and 1920s. I found case reports of over 40 epidemics of gonorrhoea in institutions throughout Europe and the United States involving thousands of children. While the original case may have been sexually transmitted, once a young girl with gonorrhoea was admitted into a children's

hospital or orphanage, this infection would spread rapidly through the inmates. Because no antibiotics were available for treatment, these infections had a huge impact and were the subject of intense international discussion.

The most common site of infection was vaginal in pre-pubertal girls, but children also developed infections in the eyes, rectum, and joints. In cases of serious infections some children died. In 1883 after an infected girl was admitted into a Budapest hospital, 25 girls developed vulvovaginitis and a nurse contracted conjunctivitis. The infection was thought to be transmitted via contaminated bedding, instruments and bandages. In one case in Posen (now in Poland), 236 little girls developed the infection from sharing a public bath. In 1896 after an infected child was admitted into a New York City orphanage, 65 girls developed vulvovaginitis with some progressing to peritonitis. In this case the disease was spread by common bathing of 20 to 30 children in a tub. A boy also developed an infected eye from a towel. A 1927 epidemic in a Philadelphia hospital involved 67 babies in same ward. The initial case was likely a vertical transmission from birth but the infection was probably spread by the use of a rectal thermometer leading to the babies developing vulvovaginitis, rectal infection and arthritis.

For most of these cases there can be no doubt that the infective organism was gonorrhoea. *Neisseria gonorrhoeae* is a gram-negative diplococcal ('double rod' shaped) bacterium. It was

diagnosed microscopically by seeing the bacteria inside cells from gram-stained smears of secretions and also by culture of the bacteria on selective media wiped with infected swabs. There are many other species of *Neisseria* as well as *N. gonorrhoeae* (for example, *N. lactamica*, *N. cinerea*, *N. meningitidis*) which may be present normally in the mouths and throats of adults and children. However these do not cause infections such as vulvovaginitis. The combination of the vaginal symptoms plus identification by both gram stain and culture realistically means there is no other organism that could have been responsible for these outbreaks.

The only means of control of these epidemics was identification and prevention of the source of transmission. Strict isolation strategies were introduced. In some institutions girls underwent vaginal cultures and were refused admission if they were found positive with gonorrhoea. In other cases, infected children were kept isolated with separate rooms and separate nurses. Strategies documented in the literature to curb outbreaks include no sharing of clothes, wash cloths, towels or bathwater. Infected children were provided with individualised thermometers, nursing bottles and combs. Nappies were sterilised or made of light muslin and then destroyed. Strict attention to hand-washing in caregivers, especially nurses, was introduced and in one institution an epidemic was finally brought under control by nurses wearing rubber gloves to change nappies.

Household transmission

There are a number of cases reported in the literature of clusters of gonorrhoea infection (vulvovaginal, urethral and conjunctival) occurring in overcrowded living conditions where there are many family members in small crowded dwellings. In these circumstances there is often sharing of bedding, towels and under-clothes, and lack of available water for personal and laundry washing. Case reports come from all over the world from countries such as Nigeria, Malaysia and Alaska. There is a British report of an eight-month-old boy who presumably developed gonococcal conjunctivitis from the towel of 21-year-old infected female lodger, and two preschool children similarly contracted eye infections from towels used by infected parents.

In household cases often it will not be possible to determine whether transmission has been sexual or non-sexual. However in these circumstances, especially where there is no disclosure of sexual abuse by the children, nor any sign of trauma on examination, some cases are likely to have resulted from contamination rather than sexual abuse.

What happened to Lana

Lana was 13 months old when she was taken into foster care. Her mother was pregnant at this time. Two months later her parents separated for a month in an attempt for Lana to be returned to her mother, but the doctors involved were adamant that either her mother or her father had sexually abused her and therefore she was safe with neither. A month later the couple reunited.

When Lana was aged 18 months her brother was born. CYF had been considering uplifting him at birth but they decided to allow the parents to keep their boy. Lana was cared for in a number of different foster homes.

By the time the case was heard by the Family Court, she was aged two years six months. I wrote a report on the possibility of both sexual and non-sexual transmission, and provided the doctor for CYF with photocopies of all the papers in my review. However she stated that "Mothers and fathers can abuse children and there has had to have been transmission from and to mucous membranes". Furthermore: "It does not help that Dr Goodyear-Smith is suggesting that accidental contamination is possible when there is no scientific evidence in the literature that has ever confirmed this possibility". She dismissed all literature prior to 1980 as unreliable, and considered that the institutional cases were either all cases of unrecognised sexual abuse, or alternatively were caused by an organism other than gonorrhoea. She said that the vagina was a different "immunological compartment" to the conjunctiva (hence you could have non-sexual transmission in the eyes but not the vagina), and persisted with the orthodox view that gonorrhoea in a child beyond the newborn age is sexually transmitted.

The judgement was reserved for another two months, and was released when Lana was aged two years eight months. The judge accepted the orthodox view, decided that it was more

likely than not that Lana's infection had been sexually transmitted, could not determine whether it was her mother or her father who had abused her, expressed concern at her parents' steadfast and united denial of sexual abuse, considered that there was a grave risk that Lana was likely to be sexually harmed if she was returned home and therefore made a declaration that the little girl was in need of care and protection as a ward of the state.

An Australian case

I was involved in a similar case in Australia where a father, who had transmitted gonorrhoea to his young daughter, was similarly accused of sexual assault. He had been acquitted in the criminal court but the social services would not allow him to have any contact with his wife and daughter. They were fighting to be reunited as a family and the case finally reached the Appeal Court in March 2008. I attended a conference of expert witnesses in Australia, where myself, an Australian pathologist, two Australian sexual health physicians and an American paediatrician spent a day with an independent mediator to discuss the possibilities of non-sexual transmission. The three Australians and myself were in agreement that non-sexual transmission could occur, and in our opinion was the likely cause of the child's infection in this case. The paediatrician was adamant that non-sexual transmission was not possible. The case was heard in the Appeal Court over the next few days and resulted in the judgement being in favour of the opinion of myself and my Australian colleagues.

International controversy

British Medical Journal

Having conducted this comprehensive systematic review, I considered it important for this information to be disseminated professionally in the peer-reviewed academic literature. I submitted my paper for consideration to the British Medical Journal (BMJ). Their review process took considerably longer than usual. I later learnt that this was because of debates by the journal editors on whether to consider it for review, and then difficulty finding someone to review it. Eventually it received one of the best reviews I have had. The reviewer wrote:

“The paper tries to redress some balance to this emotive area and uses evidence to show that each case of infection should be judged on individual merit ... the paper is important and should be accepted for publication.”

Despite this review, the *BMJ* editors then rejected the paper because:

“We can find no evidence that the guidelines (or anyone really) would suggest that a mere finding of this sort would merit removal of a child from its family as suggested in the intro to this piece. All authorities in the UK would say that it is just one piece of evidence to be added to others.”

Journal of Forensic and Legal Medicine

I subsequently, in 2007, published my review in a peer-reviewed forensic medical journal, the *Journal of Forensic and Legal Medicine*, (JFLM). I also presented my review at the Faculty of Forensic and Legal Medicine, Royal College of Physicians

Conference in Torquay, England in 2007 to a responsive audience. My paper solicited a long and scathing Letter to the Editor by Nancy Kellogg, author of the USA guidelines (*Committee on Child Abuse and Neglect. Clinical Report: the evaluation of sexual abuse in children*, published in the journal *Paediatrics* in 2005). Kellogg described my review as “One person’s speculative journey into her belief that non-sexual transmission is not rare” claiming “She provides neither evidence nor a systematic review.” She suggested that the numerous institutional cases were either all cases of sexual abuse or alternatively were due to an organism other than gonorrhoea. She wrote:

“It is totally baffling why case reports met the criteria for this “systematic review,” yet randomized controlled trials, comparing, for example, the gonorrhea rates of children who were sexually abused to children who were not, were excluded.”

Kellogg’s letter was published with my rebuttal. I responded that hers was a strawman argument, because fortunately gonococcal infection in prepubertal children is a rare event, by whichever means it has been acquired. Mine is in fact a rigorous systematic review, meeting all the required criteria, and the reason why no randomised controlled trials were included were because none exist, and would of course be unethical to conduct.

NZ Lawyer

An article about my review was published in the *NZ Lawyer* 12 October, 2007). NZ members of DSAC (Doctors for Sexual Abuse Care) Drs Janet

Say and Patrick Kelly wrote a Letter to the Editor the following month, claiming that mine was not a systematic review, that the outbreaks in institutions were caused by non-gonococcal organisms, that the outbreaks in institutions were caused by sexual abuse, that “The eye (anatomically, immunologically, and physiologically) is different from the genitalia” and that I had not conducted a forensic sexual abuse examination in 20 years.

Again I had right of reply and had the opportunity to explain how the review was systematically conducted, and why the papers reviewed involved cases where the diagnosis of gonorrhoea in institutions was not in doubt.

The physical signs of child sexual abuse

The Royal College of Paediatrics and Child Health (RCPCH) was conducting a major revision of their child sexual abuse guidelines, and colleagues of mine in the Faculty of Forensic and Legal Medicine, Royal College of Physicians, sent them my review to include in their chapter on sexually transmitted diseases. “The physical signs of child sexual abuse: An evidence-based review and guidance for best practice” was published in March 2008. Despite receiving my review, this book persisted with the message that gonorrhoea in children after the newborn period indicates sexual abuse. They wrote:

“sexual abuse is the most likely mode of transmission in pubertal and prepubertal children with gonorrhoea”

and:

"In a recent systematic review, Goodyear (2007) considered the evidence for non-sexual transmission of gonorrhoea in children after the neonatal period. This review did not have the rigorous criteria used in this evidence-based guidance concerning the certainty of diagnosis/exclusion of abuse and included conjunctival infections".

At the book launch the leading authors of this chapter, Drs Karen Rogstad and Amanda Thomas, said that there was no evidence of children acquiring gonorrhoea from non-sexual means. The full audiotape of the proceedings was posted on the RCPCH website. When asked about my review Dr Rogstad said that it was a very dangerous paper developed by someone producing papers to support an incongruous belief and that it was a harmful editorial that had not been peer-reviewed.

My subsequent complaint to the RCPCH has resulted in their removal of the audio-taped recording of the book launch from their website, and an apology

that my work was not "a non-peer reviewed editorial", but has made no concessions regarding the possibility of non-sexual transmission in children. What I asked for but did not receive was a page insert into the book (in those volumes not yet sold) explaining the importance of considering both non-sexual and sexual transmission when gonorrhoea is found in children, looking at it case-by-case for possibility of both sexual contact and accidental contamination, with reference to my review plus Kellogg's letter and my reply. I also requested that this statement be posted on the RCPCH website at www.rcpch.ac.uk/Research/CE/RCPCH-guidelines where the book is promoted.

Does it matter?

While Drs Kellogg, Rogstad, Thomas, Kelly and others have made disparaging remarks about me and erroneously criticised and discredited my work, I am well used to such attacks which in themselves have little impact on me. However, *The physical signs of child sexual*

abuse is a guidance published by the RCPCH which purports to promote best practice based on an evidence review. This potentially is a highly influential publication in the English-speaking world.

It is my presumption that my review is considered as "dangerous" because it was perceived that it might assist guilty men be acquitted, and children returned into unsafe homes. My view is that in the absence of any supporting evidence or suspicion of sexual abuse, the presence of gonorrhoea alone may not be adequate evidence to convict beyond reasonable doubt, nor even to remove a child from its family on the balance of probability that the child has been sexually abused. While I do not want guilty men to go free nor children returned to abusive situations, nor do I want innocent men convicted and non-abused children losing their families.

This has very significant medicolegal ramifications. In most instances where children are diagnosed with *N. gonorrhoeae* there has been no disclosure of child sexual abuse. Clearly the possibility of abuse must be immediately and seriously entertained and investigated. However forensic physicians and paediatricians using *The physical signs of child sexual abuse* as their guideline will be unaware that non-sexual (indirect or fomite) transmission may be the mode of infection in some children, and that this possibility must also be considered on a case-by-case basis.

Furthermore, doctors including myself who put forward the possibility of non-sexual



WHEN THE GOOD COP - BAD COP ROUTINE NO LONGER GETS RESULTS, YOU KNOW WHO TO CALL. POSTMODERN CRAP COP.

transmission in particular cases in the courtroom, are likely to be presented with statements from *The physical signs of child sexual abuse* which will be used to discredit or override my review. These guidelines may serve to misinform some of those involved in the care of children and young people.

Apart for the cases in which I have been involved, it is clear that in New Zealand at least, if gonorrhoea is found in a pre-pubertal child beyond the newborn age sexual abuse is presumed a “medical certainty”. In 11 years there were 14 cases seen at the Auckland children’s hospital (Kelly P. 2002: NZ Med J 2002;115(1163). All were taken to their GP with genital symptoms and abuse was not suspected until the gonorrhoea was detected, but all cases were deemed sexual abuse. The identity of the perpetrator was deduced ‘based on who was in contact with child during incubation period’. The outcome of these cases were convictions of suspected abusers, children taken into care and families fleeing the country. It is not possible to know if at least some of these cases were the result of accidental transmission, because this possibility was not considered. It is not known how many cases are occurring in the UK and elsewhere where children are found to be positive for gonorrhoea and sexual abuse is automatically assumed.

Clearly it is difficult to determine whether transmission has been sexual or non-sexual. In the past, cases of sexual abuse may have been missed. The current thinking is that gonorrhoea is definitive evidence of sexual

abuse or contact, yet there is conclusive evidence that accidental contamination may occur on occasions. It is my recommendation that all such cases must be taken seriously and considered on case-by-case basis. Missing sexual abuse has serious social and legal consequences, but removing children from their parents on wrongful assumptions can be equally damaging.

Doctors and lawyers should be cognisant of the large body of literature demonstrating both sexual and non-sexual means of transmission of gonorrhoea in children.

Felicity Goodyear-Smith is an Associate Professor in the Department of General Practice & Primary Health Care at Auckland University.

superstitions

Superstitious? Me? That depends

Vicki Hyde

When the Sunday Star-Times decided to survey the nation on how superstitious New Zealanders are and about what, I got used as guinea pig. Having done a lot of survey design and analysis during the course of my hodge-podge of an academic career, I often end up writing more about the questions than answering them. Add to that the tendency for being, as Margaret Mahy once characterised our group, “a person in a state of terminal caution”, and you can imagine the result.

Well, actually, you don’t have to imagine. Here, from the files of the Chair-entity, is the first half of the response the Star-Times got. See next issue for the rest.

Superstitions

The list below describes actions or events that are often considered lucky or unlucky. Please indicate the extent to which you would try to avoid each one OR make a particular effort to try to make it happen. (7 = I would do this, 1 = I would try hard to avoid this, 4 = Neutral)

- *A black cat crossing your path*

Not worried about this – 4? Course that might just be the *Toxoplasma gondii* speaking (a cat-borne parasite that sits

inside the human brain making you more prone to car accidents – truly! look it up!)

- *‘Knocking on’ or ‘touching’ wood*

5 – for cultural reasons, from time to time to emphasise a point. In much the same way that I’d say “God forbid” without actually expecting the old chap to take a personal hand in things.

- *Tossing spilt salt over your shoulder*

To Page 12

Breast-pill maker busted

A COMPANY making pills which falsely claimed to enhance women's breast size has been fined \$100,000 for breaching the Fair Trading Act (National Business Review, 16 December).

The Commerce Commission took the action against Erdic Ltd and its manager Allan Mitchell in the Auckland District Court after the company made claims in a brochure and on two websites that its pills were a natural alternative to breast implants and could significantly and permanently increase the size, shape and firmness of women's breasts.

The commission found that "taking the tablets at the recommended dose would have no significant hormonal or other relevant effect in adult women of reproductive age that would lead to permanent alteration in breast shape and/or enlargement of breast size".

Judge Kerr noted in sentencing that herbal alternatives to plastic surgery would appeal to those in the target market who were gullible, naive and wanting to increase their bust size.

Commerce Commission Director of Fair Trading Adrian Sparrow said consumers relied on information provided by businesses to make decisions about the products they purchase.

"Those marketing natural or alternative therapies have the same obligations as other businesses under the Fair

Trading Act, and that is to ensure that claims made about benefits gained are accurate."

Allan Mitchell and Erdic also pleaded guilty to breaching the Fair Trading Act by falsely claiming ads in the TV Guide and other Fairfax magazines had been approved by the Therapeutic Advertising Pre-vetting Service.

"There is always someone willing to sell snake oil to the unwary," said Adrian Sparrow, "so the commission strongly advises consumers exercise common sense before purchasing 'miracle' pills and potions that make improbable claims."

Big money for 'Bigfoot'

The hoax Bigfoot carcass reported on in last issue's Newsfront has sold on eBay for US\$250,203 (Fox News, 20 October).

The hoaxers, Rick Dyer and Matt Whitton of Clayton County, Georgia, displayed a freezer containing a gorilla suit stuffed with animal parts which was rapidly debunked by a DNA test. The seller was named as North Carolina "paranormal entrepreneur" Joshua P Warren, who said the money would go towards resolving legal conflicts.

Dyer and Whitton sold the specimen in August to Californian Bigfoot tracker Tom Biscardi, who had persuaded Indiana "investor" William Wald Lett,

Jr to stump up the US\$50,000 required. Days after the hoax was revealed Lett filed a criminal complaint in Clayton County.

Warren's eBay auction page explained that the animal parts had since been replaced with "non-organic" materials.

After all the debts are paid and legal matters dealt with, any remaining auction money will go to Warren's Hoax Research Center, which he said was a nonprofit entity.

Kaikoura UFOs – 30 years on

Last December 30 was the 30th anniversary of the Kaikoura UFO sightings – and for some the memory is still as fresh as ever. TV producer Leonard Lee related his memories of the affair in the NZ Herald (29 December), describing how he received an early-morning call from his newsroom chief of staff Neil Miller in Melbourne, "babbling" that one of their reporters, Quentin Fogarty, and a freelance film crew had filmed UFOs from a freight plane over Kaikoura. Lee had sent him to report on another apparent encounter by two pilots 10 days earlier.

He managed to get Fogarty on a trans-Tasman flight on New Year's Eve, and together they watched the footage of the unidentified lights, "dancing and changing shape". They had a sleepless night and spent the first day of the new year fielding calls from all over the world.

It was after screening their 30-minute documentary, he said, that “the sceptics – numerous scientists among them – started screaming at us from around the globe.

“We had, they said, filmed Venus, Mars, Jupiter, squid boat lights, mating mutton birds, everything in fact except UFOs, whatever they were.”

Lee goes on to quote US optical physicist Bruce Maccabee (he was also chairman of the Fund for UFO Research Inc., though Lee doesn't mention this), who analysed the film and concluded they could only have been squid boats if they were “flying squid boats”.

Or maybe not. In the Spring 2000 NZ Skeptic former DSIR scientist William Ireland had another look at the documentary footage and concluded that a group of squid boats, viewed at a distance of about six kilometres, would match the reported sighting very closely.

By now, the story has passed into New Zealand folklore. People will choose to believe what they will.

Religious fakes like ‘gasoline on the flames’

USA Today (22 October) had a good report of the controversy over the James Ossuary, an ancient casket alleged to have held the bones of Jesus' brother.

Six years ago, the two-foot-long box made the cover of Time magazine and drew crowds of 100,000 when it went on display in Toronto's Royal Ontario Museum. It bears an inscription, in

Aramaic, saying “James, son of Joseph, brother of Jesus”.

But the ossuary has a dubious past. Its origins are uncorroborated, and many outside experts have concluded the part of the inscription referring to Jesus is a later addition.

According to Nina Burleigh, author of *Unholy Business: A True Tale of Faith, Greed & Forgery in the Holy Land*, it is part of a tradition of fake relics going back for millennia. It also shows the subjective nature of much archaeology, particularly the biblical variety.

Although selling religious fakes to rich collectors may appear to be an almost victimless crime, Burleigh says it's a problem when dealers and forgers toy with believers.

“It's a scam: Forgers take money from gullible believers that would have gone in the collection plate to help people. And they are distorting the truth. Especially in writing, we need in situ findings to have an accurate account of history.

“Finally, the forgers are really playing with fire. Things are so tense in East Jerusalem, to throw fake biblical artifacts into the mix puts gasoline on the flames there.”

Psychics cash in

Times may be tough economically, but it seems psychics at least are enjoying boom times (Wired, 8 November).

On September 30, when the Dow-Jones index fell 770 points, self-styled internet medium

Katrina Spears came home to find she had messages from 30 clients.

While the bulk of psychic business is usually advice on relationship issues, there has lately been a marked shift towards requests for information on what the future holds financially.

Columbia Business School professor Gita Johar says the boom in superstition is a predictable response to troubling times. “If the future is uncertain, people turn to psychics. You have an illusion then that you can then control the outcome. People want the illusion of control.”

Hourly rates for on-line psychics range from US\$100 to \$1000, but this has not deterred the callers.

“It's really starting to pick up,” says someone who calls himself Pure Empathy. “People are more depressed, and I can easily make \$150 to \$200 a day.”

Spears, however, says the spike was short-lived, and her business is now back to normal.

In case you were wondering, this is the advice Spears is giving: “Things will improve in March, April and May and start progressing from there. We are not about to go into a holy war that means everyone will have to eat rice and beans for the rest of our lives. But it is back to basics, and people won't shop as much.”

That pretty much covers it. But is this kind of thing worth \$3 a minute?

From Page 9

2 – wouldn't usually bother, as it's messy

- *Walking under a ladder*

2 – if only for safety reasons; I always look up.

When the Skeptics Conference opened one year on a Friday 13th, we had a ladder parked over the entrance doorway and everyone came through under it. We also had a box of mirror glass to break, chain mail letters to ignore, salt to spill, umbrellas to open inside – 13 superstitious activities in all. And it was the one conference where all the speakers ran to time and all the technology was cooperative ...

- *Throwing a coin into a fountain or well*

5 – for cultural reasons (and often because the money is collected for a good cause, also to help future archaeologists have a good time :-)

- *Breaking a mirror*

2 – not usually deliberately, though I had fun dropping a large box of mirror glass into the transfer station with suitably satisfying sounds of shattering – should have permanent bad luck as a result!

- *Wearing a piece of lucky clothing or uniform to a sports game or an exam*

4 – I don't have anything like that in my wardrobe.

- *Thinking about something you really want to happen/are looking forward to*

7 – Huh? What's superstitious

about that? You don't have to enlist the aid of creative visualisation or The Secret (TM) to daydream!

- *Wishing on a falling star*

7 – Doesn't stop me from marvelling at the thought of tons of space dust landing on our planet every day, nor wondering what would happen were the thing to be a bit bigger and land in the Pacific ...

- *Looking at the new moon through glass*

Wow, hadn't heard of this one – what kind of astronomy writer does that make me?!

- *Carrying a rabbit's foot*

1 – Kinda gross really. I'd rather wear a half-billion-year-old trilobite fossil (got a silver-mounted one for Christmas), but that's only 'cos it's truly awesome to think it was once wombling around on the ocean floor, not because I think it will bring me luck.

- *Standing chopsticks upright in a bowl of food*

1. For culturally sensitive reasons. I lived for five years in Japan, so I would no more do this than put my hat on the table in the wharekai. That said, I once had the most appalling meal of my life in a Japanese restaurant in London and, as a mark of disgust, I stuck the hashi upright when I left. Don't think the staff noticed – they were French and Korean, which might explain the absolutely awful food ...

- *Finding a four-leaf clover*

4 – Fun in a vaguely interesting way, but not exactly an exciting pastime.

- *Crossing your fingers*

5 – For cultural reasons or to make a point verbally (see knock on wood above).

Urban Legends – or are they?

Below is a list of (sometimes controversial) theories and beliefs (some of which are definitely true, by the way). Please read through, and indicate how likely these are to be true.

7 = Very Likely, 1 = Very Unlikely

- *If you go swimming within an hour of eating you're more likely to get cramp and drown*

1 – I've researched this one – my son wanted to do it as a science fair project, but we figured getting ethical consent to experiment on his classmates would be difficult!

- *The food colourants cochineal and carmine are made from crushed beetles*

7 – Cochineal definitely, not so sure about carmine as I don't know much about that apart from the colour name. Though I daresay these aren't used much today with synthetic alternatives being available.

- *We use only ten percent of our brains*

1 – This hoary old one comes up all the time and is a total misinterpretation of the original quote that just doesn't seem to die.

- *Eating carrots improves your eyesight*

1 – I love the story of Bomber Command putting this about to try to disguise the development of radar during WWII.

Course, if you want to use this as a metaphor for having a balanced diet and needing some of the vitamins/minerals carrots can give you, then it's probably better to eat the carrot than not eat it. Don't overdo it though or you'll end up looking vaguely jaundiced (there have been cases of that in New Zealand)!

- *If you spend too much time at a tanning salon, you can cook your internal organs*

2 – Hmm, I'm sure Mythbusters have done something on this but, like so many of their things, I remember them doing it but not the results. I think it unlikely, particularly if the sessions are being run to proper standards. If you just stayed in there it's possible there may be some low-level thermal damage, but I suspect it would take a long time and/or would not penetrate much.

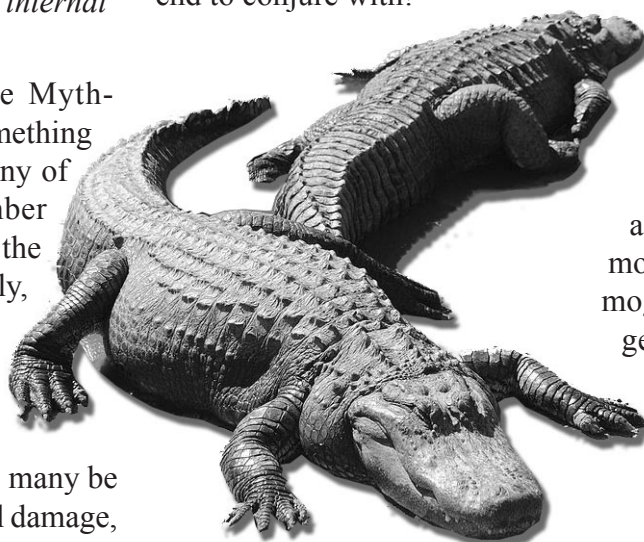
- *Using a cellphone at a petrol station can cause an explosion*

2 – Ah, a Mythbusters episode I do remember. They had to go through some highly convoluted situations to get finally an explosion. It doesn't look like ordinary usage can do this, which doesn't stop people being told to switch their phones off. Course, they shouldn't have their phones on in the car in the first place, but that's another story ...

- *Pet baby alligators have grown to enormous size in sewers after being flushed down the toilet*

5 – For a certain value of enormous which I suspect is pretty small. You can flush a baby alligator down the toilet, depending on the sewerage system you have, and it can grow down there if the rats don't get it first.

Ever read Harlan Ellison's short piece about the giant albino alligators living on the dope flushed down the sewers of New York? Now *there's* an urban legend to conjure with!



- *The seasons are caused mainly by changes in the earth's distance from the sun during its orbit*

5 – Not an urban legend as such. Having an elliptical orbit helps, as does having a planet with a 23.5 degree tilt. You could also argue that local variation has as important a role – in Auckland, the oak trees tend to be green one day, then brown and on the ground the next, with hardly any autumn to show for it; in Arrowtown, the autumnal colours are spectacular.

- *As long as you pick up a piece of food dropped on*

the floor within 5 seconds it won't be contaminated by germs

5-3 – Depends where you drop it of course, as some surfaces are more contaminated than others. I always had the 5-second rule with my kids – helps build the immune system as well as save money!

- *There is a giant black cat living wild in the South Island countryside*

5 – Fence-sitting on this one. If you'd said 'panther' I'd give it a 1 straight away as extremely unlikely – those things are humongous (hip height to an adult, weighing the same as Dan Carter!).

But there could be a 'giant' black cat, as in one (or more) larger than the ordinary moggy out there. Feral cats can get very big. That said, none of the videos or photos to date have indicated that the cat/s are particularly large once you take into account distance, scale effects, the cat running etc.

My Habits

How frequently have you done any of the following? (Answer daily/weekly/monthly/once a year/occasionally/etc)

- *Visited an astrologer*

Never. Though I used to cast charts while studying astrophysics at university! That's how I learned it was more a matter of psychology than anything else.

- *Looked up your (or someone else's) horoscope*

Occasionally. Not for a long time though. That's because I got

to the point of thinking that being told to be wary of someone simply because they were a Scorpio was as distasteful as being told to be wary of Samoans or Jews. Stereotyping people in the name of entertainment is nonetheless stereotyping them, to all our detriment.

So when someone asks me my star sign, I say I'm an Asparagus.

- *Watched a TV psychic (eg, John Edward, Colin Fry)*

Sadly, yes, from time to time, but only in a professional capacity in order to make an informed comment.

- *Visited a Tarot reader*

Once, just to see how they operated.

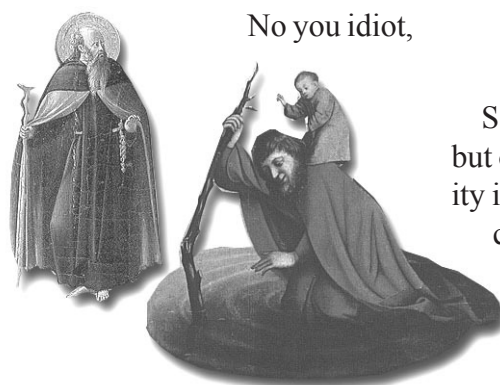
- *Looked up your (or someone else's) biorhythm profile*

Couple of times as a teenager. Seemed to have no relationship whatsoever to what was going on.

- *Visited a palm reader*

Haven't encountered one. I'd be intrigued to hear what they think of my lifeline – it doesn't end but disappears into my wrist skin.

- *Prayed to St Christopher to help you find something*



No you idiot,

that's St Anthony!

- *Visited a psychic*

Not personally, but have been to psychic readings and book launches and other promotional marketing activities by the performers involved in this growing industry. Seen the same old dreary parlour tricks time after time, which is sad, 'specially when you see vulnerable people being ripped off.

- *Attended a séance*

No.

- *Watched 'Sensing Murder'*

Sadly, yes, from time to time, but only in a professional capacity in order to make an informed comment. I find such psychological manipulation ethically objectionable, especially as an excuse for exploitation. (Isn't that a fine word – we need to introduce it into the idiom!)

forum

Why do men have nipples?

NIKOS Petousis, in his article Skepticism Greek-style answers many questions which have previously puzzled me, for which I thank him sincerely.

In return, may I answer one of his own unanswered questions? He had asked why God gave us such useless things as nipples on men. Many people, doubtless not attendees at the 2008 Skeptics conference, would claim Intelligent Design or Divine Guidance.

I know better. Those apparently useless appendages evolved for two excellent reasons, both

for the benefit of the medical profession. The first reason is so that the doctor knows where to apply a cold stethoscope for maximum effect. The second is so that if the patient is unclothed, the doctor knows if s/he is looking at the front or the back. Q.E.D. (Sorry to revert to Latin, but I don't know the Greek for this. Perhaps Nikos could help).

David L Smith

PS If you are in doubt about my theory, please check with John Welch for a second opinion.

PPS I've just realised that in sending this by email I cannot sign this in my usual manner (copyrighted) which you seem to have appropriated! However, I hasten to assure you that I am not planning legal action in the matter. When I did attempt to sign in my usual manner, the pen skidded on the monitor screen, which now has some nasty inky scratches.

(That's OK – we Davids have to stick together! - ed.)

Darwin Day events

In honour of the 200th birthday of Charles Darwin and the 150th anniversary of the publication of his dangerous idea.

Charles Darwin: Evolutionary Thinking. Exhibition at Otago Museum, level 3, Dunedin. On now through 2009, free entry.

www.otagomuseum.govt.nz/charles_darwin_evolutionary_thinking.html

2009 BioEd Conference. Christchurch Convention Centre, 12-15 February.

One of six coordinated international events celebrating the birth of Charles Darwin, the "Darwin 200 Symposia". These meetings are being run under the auspices of the International Union of Biological Sciences (IUBS), Commission on Biological Education (CBE) and the United Nations Educational Scientific and Cultural Organization (UNESCO).

awcmee.massey.ac.nz/IUBS_BioEd_2009/index.htm

Public plenary lectures. 13-15 February. 1.30pm, Christchurch Convention Centre.

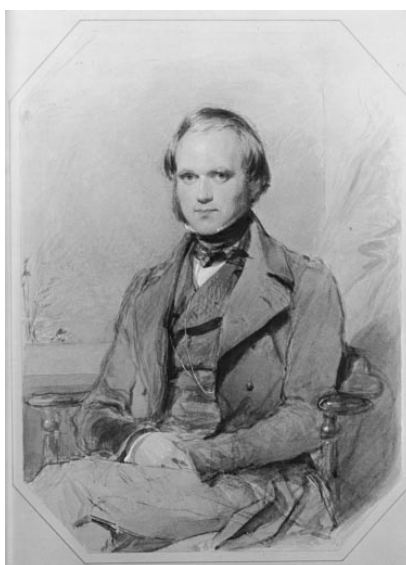
13 Feb: Anat Yarden on Bridging between the dynamics of biological discoveries and high-school biology education.

14 Feb: Douglas Futuyma on Teaching Evolution and the Nature of Science.

15 Feb: Alan Dixson on Sexual Selection and the Origin of Human Mating Systems.

awcmee.massey.ac.nz/IUBS_BioEd_2009/plenary.html

Collapsing Creation. A play at the James Hay Theatre, Christchurch, on Darwin and his dilemmas. 12 February, 7.30pm



Darwin Lectures. National Radio six-part series available as podcast and MP3.

www.radionz.co.nz/national/programmes/the_darwin_lectures

Celebrating Darwin. Bird Hall, Canterbury Museum, Christchurch, 17 February, 6-7pm. Dr Simon Pollard, Canterbury Museum's Curator of Invertebrate Zoology, will celebrate Darwin's life and show how his theory of natural selection is one of the most significant breakthroughs in scientific history.

Birthday Symposium. 12 February, 9am-5.15pm, Fisher and Paykel Appliances Auditorium, Owen G. Glenn Building, 12 Grafton Rd, Auckland.

A celebration of Darwin's legacy and 150 years of (R)evolution. Free public seminars.

The University of Auckland's Bioinformatics Institute and the School of Biological Sciences will hold a symposium that brings together leading national and international thinkers who will speak of the impact of Darwin on their research in biology, medicine, history and literature. This event has been designed to appeal to a general audience. Morning and afternoon tea provided. Reservations not required.

darwin.org.nz

A Tangled Banquet. Woodlands Cafe, Gordonton (Waikato), 12 February, from 6pm. Celebratory buffet dinner to be preceded by a 'Struggle for Existence' twilight cricket match, weather permitting. \$35/head. Contact David Riddell and Annette Taylor, number8@ihug.co.nz

Café Scientifique. BBC, Victoria St, Hamilton, 17 February from 7.30pm. Alison Campbell of Waikato University will lead a discussion of Darwin's legacy.

The Art Instinct. Denis Dutton's book on Darwinian aesthetics is to be released by Oxford University Press on February 12.

Darwin Day International. Information on events around the world can be found at darwinday.org



Bogus Chiropractor?

John Welch

ITHOUGHT they were all bogus! A Motueka man, Michael Dawson, was fined \$4000 for describing himself as a chiropractor. This upset Nelson chiropractor Dr John Dawson who was quoted as saying his “unrelated namesake tainted the industry.” Quite apart from Dr Dawson’s pretentious use of the title ‘Dr’, his description of chiropractic as an industry is particularly apt. It is a massage business based on aggressive marketing and creating a non-existent need for gullible people to have their backs rubbed and clicked.

‘Dr’ Dawson was further quoted: “I’m sure there are a few people out there who have written off chiropractors because of him.” One can only hope.

It’s ironic that Michael Dawson was prosecuted by the Ministry of Health, a body supposedly watching over the health system and now seen to be protecting quacks by picking on unregistered quacks.

Michael Dawson claims to be able to cure Hepatitis C and wake people from comas. These are claims that can readily be checked and will prove to be false, like most chiropractic claims.

ACC is currently experiencing budget woes and a great deal of this relates to treatment costs. Chiropractors favour prolonged and expensive treatments which have contributed to this problem. A recent study of back pain found conclusively that chiropractic manipulation was of no benefit (www.medscape.com/viewarticle/580409). This is consistent with earlier findings of the Cochrane Database.

I discovered another reference to an article in the Nelson Evening Mail which confirmed Michael Dawson did in fact have a chiropractic qualification but had failed to gain registration in New Zealand. This registration process is a farce and merely gives spurious respectability to an absurd belief system.

Consider the following; a patient goes to a chiropractor and receives a diagnosis of cervical spine subluxations for which manipulation is administered. The patient suffers an injury to arteries in the neck and has a stroke. The Health and Disability Commissioner (HDC) investigates by asking his ‘expert’ chiropractor whether the treatment was properly administered according to chiropractic tenets. The answer is yes so does this

mean the chiropractor is off the hook? The patient can file an ACC claim for treatment injury and loses the right to sue as a result. ACC picks up the tab for an unnecessary and dangerous quack treatment.

While working at the hospital the other night a young man came in with toothache. He knew he had an impacted wisdom tooth because he had been x-rayed by his chiropractor whose course of treatments had extended out to 15 weeks. That’s a lot of subluxations. In a fit of whimsy I recently labeled such extended treatments as ‘chiroprotracted’.

Marlborough Express 22 August 2008

Cosmetic Acupuncture

It appears that there is no end to the absurd claims made of acupuncture. Acupuncture face renewal is now available at Arch Hill Acupuncture. A credulous journalist visited the clinic and reported after only one treatment: “I felt – and looked – like I had spent a week in Fiji.” A complete treatment usually involves 12 visits and I would commend the journalist on the Fiji suggestion, a far better use of one’s money.

Have a browse around the website www.archhillacupuncture.co.nz. It contains the usual testimonials seen on such web pages as well as some clues to the success of this particular option. The owner of the business comes across as attractive, pleasant and supportive, all of which are good qualities to elicit an excellent placebo response. As a lot of readers will know, I can teach anyone to be a competent and safe acupuncturist in the course of a one-hour lecture. There is no need for several years' training when something has no scientific basis.

The owner is quoted as saying: "I liken cosmetic acupuncture treatment to a gardener tending the soil of a plant to produce a healthy flower." Isn't that what manure is for?

Sunday Star Times 26 October 2008

The loopy left?

The Labour-run Lambeth Council in South London is spending £90,000 to send reflexologists into schools to massage the feet of unruly pupils. Reflexology is based on the same nonsensical ideas behind acupuncture, that pressure applied to areas on the foot can influence health and behaviour. The article contains a very interesting and important statement linked to what I was saying earlier: "Reflexology is not a regulated therapy and medical authorities have raised concerns that qualifications are not needed to perform the massages." The medical authorities ought to be denouncing this nonsense, not wittering on

about 'regulation'. Regulation merely provides spurious recognition, similar to the ridiculous situation of having 'unregistered chiropractors' versus 'registered chiropractors'.

I fear that political considerations are behind a lot of these dopey decisions. At one of our conferences somebody asked a senior ACC doctor why ACC continued to fund acupuncture when it is an expensive and useless treatment. The answer was given that whenever they tried to cut back on acupuncture spending patients complained to their MP and he would get a call from the Minister asking, "why aren't you funding acupuncture?"

Given the financial woes of ACC, one can only hope that the new Minister instructs ACC to do something about treatment spending. There are too many snouts in the trough!

Christchurch readers interested in reflexology training will be pleased to know they can do a Diploma course (NZQA accredited level 6) at the Canterbury College of Natural Medicine.

www.dailymail.co.uk

Fluoridation

Bruce Spittle (Forum 89) invited me to review his book entitled Fluoride Fatigue. I can report that I have read parts of it but had to stop because I became depressed. I will leave readers to make their own assessment. It is available free at www.pauapress.com

I would certainly not pay to buy this book which is a collection of anecdotal case reports

and quotes from other people who share the author's views. It is written in the style of the sort of books found in the New Age section of a bookshop or library. Here is an example:

"Neither in the hospital nor after her discharge was she given any medication. Instead, she was instructed to avoid fluoridated water strictly, not only for drinking but also for cooking her food as well. She was also told to avoid both tea and seafood because of their high fluoride content. The headaches, eye disturbances, and muscular weakness disappeared in a most dramatic manner. After about two weeks her mind began to clear, and she underwent a complete change in personality. For the first time in two years she was able to undertake her household duties without having to stop and rest. Within a four-week period she had gained five pounds."

This is a classic description of the sort of person who gets chronic fatigue syndrome, Gulf War syndrome, multiple chemical sensitivity – take your pick. A person with vague symptoms looking for some convenient attribution.

I was interested however in the link to the author's website on moa sightings. At least the extinction of the moa can't be blamed on fluoridation.

Apart from both words starting with 'F', there is no medical evidence to link fluoride with fatigue (or depression). Fatigue is common and is not a diagnosis. In a random survey of the US population in 1974-75, 14 percent of the men and 20 percent

of the women said they suffered from fatigue.

The best place to read well-balanced accounts of fluoridation is a Ministry of Health web page. In contrast, a casual browse through the many anti-fluoridation web pages would make anybody justified in using the term ‘crackpot’.

Bionase

I was forwarded an email from Rod who was interested in some product that shines red light up the nose for treatment of hay fever. I googled “shine red light up nose” and immediately arrived at the web page of Bionase. The product has two nasal probes that shine a red light up the nose. It was claimed that this had been scientifically tested and there was a link to an impressive looking study published in the *Annals of Allergy Asthma & Immunology*. A search of Medline revealed that this was the only study, described as double-blind and placebo-controlled. The paper appeared plausible but continued reading revealed a fatal flaw. Use of the probes caused the nose to light up red. The placebo device did not do this. The experiment is therefore not double-blind. Whilst not given to predictions I will say that if this trial is repeated with a proper blinding this device will be shown to be useless. It is simply biologically implausible, just like homoeopathic trials claiming to treat hay fever. As somebody once said, if any homoeopathic trial showed a beneficial effect your first action is to question the conduct and design of the trial (google Benveniste).

Testing time for squidmas cake

Annette Taylor *learns it's not enough to have your cake, you have to test it too.*

THE Yuletide has well and truly washed up at our place, much food has been eaten and we are still in recovery mode, digesting it all. In addition to many other food types, we managed to get through one rather excellent ham and three – or was it four? – Christmas cakes.



Two of the cakes were baked for an experiment and had to be eaten in the interests of science and skeptical thinking. Our household unhesitatingly stepped forward with empty plates and open minds.

The question we pondered was what gives better results – baking a cake months early and letting the flavours merge and mingle, or knocking one up on the day before Christmas.

Tradition and old wives have it that Christmas cakes improve with age, especially if they are given liberal dousings of brandy every couple of weeks. Then it matures and, the story goes, improves over time.

As a food writer of many years, this was an issue I was keen to pursue.

Back in September I made my first cake, smothered it in alcohol and wrapped it up tight. Once a month until a few days before Christmas it got drizzled with more brandy. Just days before the 25th I returned to the kitchen and in no time whipped up another one using the same recipe.

Both cakes were to be compared, in a strictly controlled double-blind experiment.

It only took all morning and involved eating lots of Christmas cake, so it wasn't all bad – but it did ruin lunch that day.

One person assigned a letter, A or B, to portions of the new and matured pieces of cake based on a coin toss. A second person, who didn't know the identity of each piece, then passed them on to the blindfolded taster who declared a preference which the second person would record. By doing this there was no way in which the taster could receive unconscious cues from the experimenters as to which piece was which.

Okay, we had only three tasters who had two trials each, so statistically relevant this is not. However, the results are interesting.

There were no clear preference for either cake. Each scored equally well. So if maturing a cake really does improve its flavour, it would require a much larger and more sensitive trial than we could conduct in our country kitchen.

But what it tells me, as the cake maker, is that you can make your cake when you have the time, energy and inclination.

You can make it early to avoid the Christmas rush, or at the last minute if you're too busy attending parties. It will still be yummy.

I then had to turn around and make another cake – because both had been eaten into.

As for icing – that was a piece of cake. We did a squid, of course. This was partly in

honour of my other half's thesis topic, partly in honour of the Lovecraftian entity Chthulhu, and partly in honour of PZ Myers' blog, Pharyngula. Googling 'squidmas' produces 11,400 hits, so the concept is catching on.

Annette Taylor is a freelance writer and former editor of the NZ Skeptic. Her monthly food columns appear in the Waikato Times and on www.lifestyleblock.co.nz

'Oddzone' donated to 600 NZ schools

IN AN initiative intended to encourage critical thinking among students, the NZ Skeptics have donated copies of Vicki Hyde's book, *Oddzone*, to schools around the country.

In total, the book was sent to 340 secondary schools, 120 intermediates and 140 composites after a "marathon" packaging effort in November.

Each copy bore a bookplate with the society's name, an "encouraging critical thinking" tagline, the Skeptics website URL and a dedication to the late Bernard Howard. Within a few days of the books going out, we started to receive emails and letters of thanks from schools around the country, with many librarians expressing their confidence that the book would serve a useful purpose and gratitude for the gift. The following letter accompanied the books.

A gift for your school's library

Every year the New Zealand Skeptics are contacted by school students throughout the country looking for information across a

range of slightly out-of-the-ordinary topics - UFOs, moa hunts, pre-Maori settlement claims, the use of psychics to investigate murders and the like.

Unlike almost every other book covering such topics, *Oddzone* has a strong New Zealand focus and an emphasis on critical thinking and scientific evaluation.

It will provide interesting detailed information for your students, as well as a good ground-

ing in the analytical approach seen as an indication of excellence across the curriculum.

If you decide, for whatever reason, that the book is not suitable for your school's library, we would appreciate it greatly if it were passed on to your science staff or another school, or given to a student interested in such topics.

We hope that your students enjoy the book and find it thought provoking, and that you consider it a useful addition to your resources.

Magic for mosquitoes

Jim Ring

WHILE we were in Fiji recently there was a dengue fever alert. This unpleasant virus is carried by mosquitoes and naturally we were careful to use insect repellent.

We stayed in a Suva hotel; in the swimming pool area there was a large sign stating that guests should not worry about infections carried by insects because the pool area was protected by a MAGNETIC MOSQUITO DEFFENDER.

I searched diligently but could find no evidence of magnets, either electrical or solid state. However we decided that an invisible MAGNETIC MOSQUITO DEFFENDER would probably work as well as one that could be seen.

Some years ago I wrote in this journal that it was safe to drink tap water in Fiji. This is no longer the case, particularly in Suva.

If undelivered, return to:

NZ Skeptics
PO Box 29-492
Christchurch 8540

New Zealand
Permit No. 3357

Permit



NZ Skeptics on-line forum

The NZ Skeptics Yahoo group is a discussion forum moderated by members of NZ Skeptics.

If you go to <http://groups.yahoo.com/group/nzskeptics/> you will reach the home page of the forum. To join you can send an email to the subscription email address on the page.

Or, if you have a Yahoo ID, you can click on the join link.

NZ Skeptics (Inc.)

Chair-entity: Vicki Hyde (Christchurch), chair@skeptics.org.nz

Secretary: Paul Ashton (Christchurch), secretary@skeptics.org.nz

Treasurer: Al Dennard (Putaruru), treasurer@skeptics.org.nz

Committee: Claire le Couteur (Christchurch)

Robert Woolf (Auckland)

Warwick Don (Dunedin)

Keith Garratt (Rotorua)

Nathan Grange (Auckland)

Denis Dutton (Christchurch)

Julian Kissock (Palmerston North)

Joanna Wojnar (Wellington)

David Riddell (Hamilton)

John Welch (Picton)

Felicity Goodyear-Smith (Auckland)

Paul Trotman (Dunedin)

Media Contact: Vicki Hyde

NZ Skeptic Editor: David Riddell, number8@ihug.co.nz

Video Librarian: Alastair Brickell www.skeptics.org.nz/SK:MEMBERSVIDEO