

*The worst speculative Sceptic ever I knew,
was a much better Man than the best
superstitious Devotee & Bigot.*

David Hume

Rat bones laid to rest
Agenda-driven pseudohistory
Darwinism and Lamarckism
Conference preview
Zetetic astronomy

new zealand
Skeptic

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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.

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Making the difference

GARFIELD was right - there's nothing like a piping hot lasagne on a winter's night. Especially when eaten with good wine and fine people.

During our repast, we got to talking and the New Zealand Society for the Investigation of Claims of the Paranormal came up, as it is wont to do. What, one of our friends asked, have the New Zealand Skeptics achieved in their brief span on the planet?

This is a good question, especially in light of our upcoming 20th anniversary. One obvious answer is that it gives us members an outing at the always enjoyable and thought-provoking annual conference. In this world overrun with homeopathic, crystal-dangling, spirit-guide channellers, there's real joy to be found in talking with like-minded people, and that can not be overstated. Humans above all are social animals, and the society provides a social network for members who are thinly scattered around the country.

From an individual perspective, as a Skeptic it has been a real treat for me to watch my daughter develop an inquiring mind. Now a teenager, she called us upstairs to her room the other day to get a load of what was playing on her favourite radio station. It was medium Deb Webber talking with a young girl whose mother had killed herself. "Don't worry dear, she's here with you now, and she's always with you." And other rubbish. Our daughter was fair snorting with derision and eager to discuss the whole thing.

And still more. In my life as a journalist, I've spent a lot of time in newsrooms and have known a lot of journos. How fantastic to have an organisation with a national profile and articulate spokespeople to whom they can turn to get balance on that ghost story. The older hands know about us, and it does have an impact.

We have built up resources, such as the video and book libraries, there is the website, from which the feature articles are available to all comers. There are the Bent Spoon and Bravo awards and the promotion of Darwin Day, and currently we're holding a competition to encourage critical thinking among high school students (see p19).

Then there are all the things our members get up to, their own projects, that have an influence on the wider community. Countless articles in magazines and newspapers, as well as books and websites.

I believe we make a difference. We may not necessarily be winning the battle, but as Carl Sagan says, we are helping keep that candle burning.

Annette.

Old bones tell new tales

David Lowe

Of all the so-called evidence that has been presented in support of human settlement in New Zealand before the second millennium, only a set of radiocarbon-dated rat bones has appeared scientifically credible. Now even that is coming under close scrutiny.

IN 1996 a paper with the rather sexy title *Arrival of rats in New Zealand* appeared in the journal *Nature*. It was by Dr Richard Holdaway and described radiocarbon studies of Pacific rat (*Rattus exulans*, called kiore in New Zealand) bones collected from avian predator sites, most in the South Island, which were interpreted to be evidence of the arrival of rats in New Zealand around AD 50 to AD 150, and humans as well, on the assumption that rats arrived as a human commensal. The results were very controversial because there is no supporting archaeological or ecological evidence for the presence of humans or rats in New Zealand until much later (around AD 1250). To be fair, Holdaway has always maintained that the ‘early’ humans were here only temporarily as fleeting visitors, ie it was transient contact, not settlement. But he has gone on to develop models involving rapid spread of the rats over both islands and also attributes the decline (possibly extinction) in some birds and other animals to predation by rampant rats well before *c.* AD 1250.

As well as lacking any archaeological or ecological evidence (such as change in vegetation as recorded by pollen profiles) for the ‘early’ arrival, problems

with rat-bone ages had emerged during the dating of archaeological sites where ages of various cultural material (including charcoal, wood, eggshell, marine shell, and large bone) were all in good agreement with one another and with other sites, but rat bone ages from the same layers were sometimes older by more than 1000 years. Critics suggested various explanations for the anomalously old rat bone ages including:

- contamination of bone through dietary uptake of old carbon (eg if rats eat seal meat – note that dates on *modern* rats and ducks at Taupo can give ages of about 2000 years because of hydrothermally derived old carbon getting into the food chain and hence rat bones)
- old carbon contamination from the environment
- dating tiny jaw bones is technically very difficult and processing of bones to produce gelatin can easily produce the wrong results, as was demonstrated in an experiment conducted by Prof. Atholl Anderson (of Australian National University, formerly Otago University). He sent ‘blind’ samples of rat bones of known age to three different radiocarbon labs and one lab returned ages that were too old

by more than 1000 years, ie he showed that subtle differences in pre-treatment of bones can markedly affect outcome (paper published in 2000)

- Oxford University AMS radiocarbon lab has shown that there was the possibility of contamination in the pre-treatment and filtering process involved in gelatin preparation – although probably a relatively minor effect (paper published in 2004)

- Anderson also demonstrated that dates produced on bones from one lab from both natural and archaeological sites showed a ‘production trend’ and ‘age disconformity’ pre- and post-1997, ie the ages changed (got younger) generally as samples were processed, the implication being that the pre-treatment techniques were gradually improved with time so that correct ages were obtained eventually. The ‘trend/age disconformity’ was published in two papers (2000, 2004) but its existence was denied by the lab director; Holdaway said that he (Holdaway) had caused the trend by submitting older samples first – this argument broke down because the trend existed also from archaeological sites (never studied by Holdaway) as well

as natural sites such as the avian predator sites.

In 1987 Professor Doug Sutton, formerly at Auckland University and now at Waikato University, had published a paper suggesting early settlement of New Zealand (approximately AD 0–500) on the basis mainly of disturbance indicators in pollen records, primarily short-lived increases in bracken. That there was no evidence apart from the pollen record disturbances (easily accounted for by natural factors such as lightning or volcanic eruptions or storms) was explainable according to Sutton by a tiny population which was ‘archaeologically invisible’. So the ‘old’ rat-bone dates seemed to support his hypothesis (called the early settlement model).

Meanwhile, I and colleagues (including Prof Rewi Newnham of Plymouth University) had published several papers in 1998 and 2000 using volcanic-ash layers as markers to try to date the earliest archaeological and earliest *sustained* forest disturbance indicators from pollen profiles. We obtained a new wiggle-match date (at Waikato University Radiocarbon Dating Lab, led by Dr Alan Hogg, and facilitated by tree-ring work by Dr Jonathan Palmer) on a widespread ash layer, the Kaharoa Tephra, which was erupted from Mt Tarawera in AD 1314 ± 12 (published in 2003). This provides a maximum age for many archaeological sites in eastern parts of the North Island – no artefacts have ever been found beneath it. It also gives an approximate near-maximum age for the

start of sustained disturbance by burning: out of around twenty pollen profiles which contained Kaharoa Tephra, four showed the start of sustained disturbance (presumably by people) was just before the eruption. From sedimentation rates this is likely to be around 50 years or so at most, ie some decades before AD 1300. This, then, appeared to be the most likely date for the human settlement of the eastern North Island.

Elsewhere in New Zealand the earliest known archaeological sites are dated reliably (using moa eggshells) from the late 13th Century to AD 1300 (eg the Wairau Bar site in Marlborough). Hence the current model for settlement (called the late settlement model) is set at *c.* AD 1250–1300.

New approaches

So, how to test the two competing hypotheses and especially

How to Poison Your Spouse the Natural Way: A Kiwi Guide to Safer Food offers an interesting, non-technical, easy-to-read description of the risks we face at the dinner table. Reviewers and readers have been enthusiastic. This book has a recommended retail price of \$24.95 but is now available for a limited time to members of the Skeptics for only \$15, post-paid.

Read more about this book on www.saferfoods.co.nz and then tick the box on the membership form (on our website) and include the \$15 with your membership fee. Offer also available to members of the NZ Skeptics who have paid their subscriptions for 2006 - send cheques to NZCSICOP, PO Box 29 492, Christchurch.

to verify or otherwise the ‘old’ rat bone ages? One way was to obtain more dates from the original sample material that led to the 1996 paper. However, it was embargoed by Te Papa, and then when that lapsed it was reported that ‘no further material is available’. Two scientists, Dr Janet Wilmshurst (Landcare Research, Lincoln) and Dr Tom Higham at Oxford University (formerly at Waikato University) came up with two approaches.

The first was to use an alternative method for dating the arrival of rats which bypassed the need for bone dating. This was done by obtaining AMS (accelerator-based) radiocarbon ages on unequivocally rat-gnawed woody seed cases preserved in sediments. Wilmshurst and Higham dated numerous seeds at three sites, one on Coromandel Peninsula and two in Taranaki (ie opposite sides of North Island). The results were extremely clear: all rat-gnawed seeds were younger than about 750 years old. The results at the Coromandel sites were confirmed by my unequivocal identification of Kaharoa Tephra there – no rat-gnawed seeds were found beneath the Kaharoa layer, but plenty above it which had given the young ages. The conclusion from this work (published in 2004) was that rats arrived after *c.* AD 1250, and not before.

The rat-gnawed seeds dating was supported by a similar study by Dr Fred Brook who dated rat-gnawed land-snail shells in Northland – his results (published in 2000) were the same: no snail shells had been nibbled before *c.*

AD 1250–1300. His dates were done at the Waikato University Radiocarbon Lab.

Together, the newly dated rat-gnawed seeds and snail shells (from widely spaced sites) showed it was extremely unlikely that there were any rats in the North Island before *c.* AD 1250–1300, but plenty after that date.

Otago revisited

The second approach was to re-examine independently the original avian predator deposits and collect new materials for dating and re-analysis. The results from one site have been published by Anderson and Higham (in 2004) – that site was called Earthquakes #1, north Otago, one of Holdaway’s key 1996 sites.

They obtained two new radiocarbon dates for pigeon bones and two on rat bones: the pigeon-bone dates were as reported in the first series (ie ‘young’) but the two rat-bone dates were much younger than in the first series, suggesting that the ‘old’ rat-bone ages from that site were not reliable for estimating the timing of human settlement.

Wilmshurst, Higham, Anderson and Trevor Worthy (Adelaide University) have collected rat-bone and bird-bone samples from other avian predator sites in the South Island, including Holdaway’s original sites. The results, as for the new seed dating work, were presented at a conference in Oxford in April and are

in the process of being written up and so are not yet available.

Holdaway attempted to re-date his sites using another technique called optical luminescence dating (OSL), which involves dating quartz grains. He claimed to have verified the ‘old’ rat-bone ages with OSL dates (in 2002). OSL dating relies on the assumption that the luminescence signal of grains is fully reset to zero by sunlight exposure before deposition. If this requirement is not fulfilled, ages may be grossly overestimated. In particular, poor bleaching can significantly affect age estimations of young sediments (especially within the last 3000 years). Because the sites are so disturbed and because the technique has uncertain (at best) to virtually zero reliability for

Tephra helped cement the late settlement story.

But I believe Anderson especially was unconvinced from the start by the ‘old’ rat bone dates hence he set about his examination of the literature and discovered the ‘dating trend’ from one laboratory and set up the ‘blind sample’ test. It seemed that it would be impossible to establish the truth when it was announced that no material was available for re-testing – but then the prescient rat-gnawed seeds and snails work came along.

The rat-gnawed seeds paper of 2004 especially, plus the re-dating of rat bones at Earthquakes #1 site paper, convinced me and most others that the ‘old’ rat-bone dates were highly questionable. Our ‘gnawing’ (!) doubts about the possibility of erroneous ages were confirmed.

Sutton’s paper certainly has stimulated a lot of work and he may well still be right. But the evidence is very strong now for late settlement. The next move is to publish the South Island nibbled seeds and rat-bone and avian-bone data from re-examined sites. That

might be the end of the story.

David Lowe is an associate professor in Earth Sciences at Waikato University.

More Skeptical Podcasts

Point of Inquiry

www.pointofinquiry.org

Point of Inquiry is the radio show and podcast of the Center for Inquiry in Amherst, New York. The Center for Inquiry is a think-tank affiliated with the State University of New York at Buffalo and is devoted to promoting science, reason, and freedom of inquiry in every field of human interest. The podcast features interviews with leading figures including Richard Dawkins, Ibn Warraq and Joe Nickell.

such young deposits, the OSL dates have zero credibility.

My position has been one of scepticism for the early settlement model because of the lack of hard unequivocal evidence for it, but a reasonably open position regarding the ‘transient contact’ model, and the ‘old’ rat bone dates were intriguing. The wiggle-match date for the Kaharoa

Agenda-driven 'History'

Bill Keir

Claims about pre-Maori colonisation of New Zealand refuse to go away.

THERE'S one born every minute. Former Act MP Muriel Newman appears to be the latest convert to the view that New Zealand was colonised thousands of years ago. Nowadays Newman runs a website-based forum called the New Zealand Centre for Political Debate (www.nzcpd.com), for which she writes a weekly column called the Newman Weekly. In January this year she posted an article called "History in the Making" arguing that recent alternative interpretations of world history challenge the view that Maori are Tangata Whenua. She wrote:

Claims have been made that New Zealand was discovered from as early as 600 BC by Phoenician, Indian, Greek and Arab explorers. In fact claims of their visits help to explain the existence in the South Island of the fossilised remains of rats that have been carbon dated at 160 BC – more than 1000 years before Maori! There are further claims that before Maori arrived in New Zealand settlements had already been established by the Waitaha, the peace-loving fair skinned ancestors of the Moriori, by Chinese miners, and by the celts.

Newman has obviously been reading the fanciful inventions of Martin Doutré (she lists his website as a 'useful' reference), Barry Brailsford and Ross Wiseman, whose writings have no credibility among historians and scientists and have been roundly debunked in the NZ Skeptic and

other journals (see NZ Skeptic 68, 72 and 73).

Newman also cited Gavin Menzies, the author of the best selling book 1421 which argues that the Chinese mariner Zheng He discovered America in 1421, 71 years before Columbus. She quoted Menzies' remarks that:

The New Zealand Government possesses several skeletons carbon dated to centuries before the Maori claimed to have reached the North and South Islands. These skeletons should have their DNA examined ... however, we need the consent of the New Zealand Government who, as might be expected, have passed the buck by saying we need Maori consent.

Newman also cited an article in the Economist which discussed Menzies' claims.

Muriel Newman's agenda is not hard to discern. The burden of her song is that if evidence emerged that non-Polynesian people settled in New Zealand before the Maori it would negate the Treaty of Waitangi. She cited claims (not sourced, but clearly echoing Martin Doutré) that the New Zealand Government and officials censor the historical record by refusing to allow alleged non-Polynesian human remains to be carbon dated and DNA tested. The intended implication is that the New Zealand Government is deliberately suppressing an alternative version

of New Zealand history that would rewrite the New Zealand history books to better fit with Muriel Newman's dream of a New Zealand without the Treaty of Waitangi. Newman is clutching at straws and her arguments fall apart as soon as you examine the detail. Let me elaborate.

She misused the Economist article. That article was entitled China beat Columbus to it – perhaps (12 Jan 2006) and was about a 1763 map of the world thought to be (but not yet authenticated as) an accurate copy of a 1418 Chinese map. Newman cited this article as support for Gavin Menzies' belief that Chinese colonies existed in New Zealand hundreds of years before Maori arrived. The Economist article said no such thing. It was about historical events in the early 1400s and only referred to possible Chinese visits to New Zealand in the twelfth to fifteenth centuries (when New Zealand was already settled by Maori forebears). Newman read what she wanted into the Economist article.

She misconstrues, or misunderstands, the Treaty of Waitangi. Evidence that non-Polynesian people inhabited New Zealand before Maori would certainly be an exciting discovery (no hard evidence exists yet), but it would not negate the Treaty of Waitangi, which was between the British Crown and the large

population of Maori tribes inhabiting New Zealand in the early 1800s. The validity of this treaty is not dependent on who inhabited New Zealand prior to AD 1000, it is dependent on who signed it in 1840. Treaties are between the signatories.

In another non sequitur Newman said, “The testing of Maori DNA ... would go a long way towards confirming or refuting these claims, but sadly many Maori appear to be opposed to its use.” She adds that some Maori were unwilling to participate in the National Geographic Genographic Project. Exactly what point she was trying to make here escapes me. Since Maori DNA can only indicate where Maori originated (the whole point of the Genographic project) it is not going to tell us anything about whether non-Maori were in New Zealand earlier.

Newman appealed to Gavin Menzies’ writings as if they are exciting new evidence that rewrites history. They are not. They use the same methods as other fringe theorists – misrepresentations of other authors, unverifiable conspiracy theories

about suppressed evidence, logical fallacies, long strings of speculative argumentation, uncited sources, invented evidence, impressive-looking long lists of supporting evidence that fall apart when subjected to expert scrutiny, and contempt for mainstream scholarship. (See historian Robert Finlay’s detailed critique of Menzies’ book at www.historycooperative.org/journals/jwh/15.2/finlay.html See also David Riddell’s review of Menzies’ book in NZ Skeptic Number 67, Autumn 2003.)

You don’t have to read very far in Menzies’ writings to detect the fanciful and far-fetched. Thirty Chinese ships containing 7000 people, trained otters (to herd fish into nets) and thousands of horses (to stock the Americas) visited almost every part of the world including Antarctica in the three years between 1421 and 1423, establishing scores of colonies and metal mining operations along the way? As Robert Finlay demonstrated, such an absurd scenario never happened. As is well documented in the contemporary Chinese records, and in the substantial scholarly literature on the subject, of the

seven expeditions of Zheng He’s fleets between 1405 and 1433 only one occurred between 1421 and 1423, and its ports of call were confined to the Indian Ocean. The rest is a figment of Menzies’ imagination.

Muriel Newman’s innuendo that the New Zealand Government is deliberately suppressing a possible alternative view of history by refusing to allow alleged carbon dated pre-Maori human remains to be DNA tested is a gross distortion she has picked up from Martin Doutré. Doutré is obviously driven by his own agenda to prove that Maori are not Tangata Whenua. He has complained in his writings that efforts by him and his friends to have human remains radiocarbon dated have been blocked by the protocols in place at laboratories requiring human remains to be appropriately documented to verify where and how they were obtained and who authorised the laboratory analysis work (which sometimes requires destruction of the sample). Doutré thinks that when some wandering amateur finds a European jaw bone in a remote cave it is essential to have it carbon dated in case it



Some River: In 1421, Gavin Menzies describes a teak (actually totara) shipwreck discovered a few kilometres south of Raglan, “near the mouth of the Torei Palma River”. The watercourse referred to is most likely the stream discharging from the Toreparu Wetland, which is approximately 1m wide where it drains on to Ruapuke Beach.

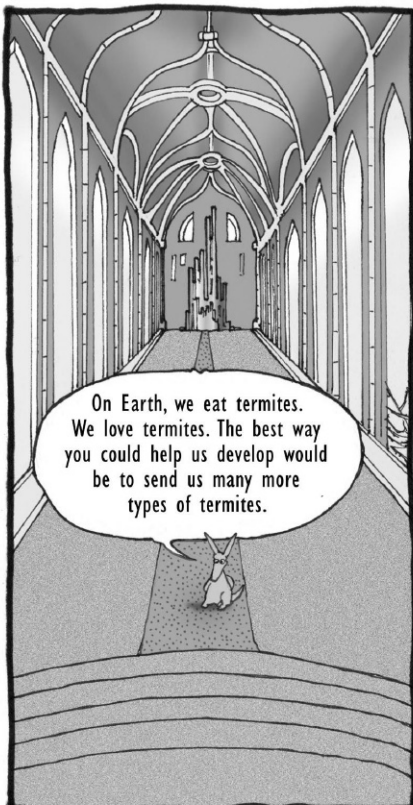
proves his pet theory that non-Polynesians inhabited New Zealand thousands of years before Maori. Archaeological methods demand somewhat more rigour than this to reach valid conclusions, not to mention the need for human remains to be suitably respected and for police interests to be eliminated.

There are, of course, hundreds of human remains stored in New Zealand museums. Many of them have been there for more than 100 years and they have arrived in the museums by all sorts of routes – some proper, some improper, some innocent, some dubious, some unknown. In recent times those whose origins have been authenticated have been rightly released to their Maori owners when requested. These skeletal remains have always been available to science via the proper channels and protocols, which are quite rightly strict. Dr Philip Houghton published definitive textbooks

in the 1970s and 1990s based on his scientific analysis of the skeletal remains of over 90 human individuals in New Zealand repositories. His work clearly identified the earliest inhabitants of New Zealand as Polynesian. Over the past 100 years archaeologists have excavated hundreds of human occupation sites throughout New Zealand yielding thousands of artefacts and hundreds of radiocarbon dates. All this archaeological, genetic and phenotypic evidence indicates that these inhabitants came from the Pacific Islands. From a scientific viewpoint this body of evidence is overwhelming. As yet, no evidence of human settlement of New Zealand has been found earlier than about AD 1000. Such evidence may be forthcoming in the future, but meantime the speculations of Martin Doutré, Gavin Menzies, and other wishful alternative theorists, should be treated with great suspicion and certainly don't constitute evidence of the

sort useful to science. (For a succinct and well-documented overview of the current understanding of the human settlement of New Zealand read KR Howe, *The Quest for Origins*.)

Muriel Newman waxes indignant about the suppression of alternative views of history and the dire implications of this for freedom of expression. Yet a cursory glance at the mass media confirms that crackpot theories get aired even more than orthodox ones because people love a juicy yarn. The Menzies book has been on the New York best seller list for a long time. Doutré, Wiseman and their bedfellows have self-published their books without any prior expert evaluation. Like Muriel Newman they have their own websites where they can write what they like for the whole world to read. Newman should be grateful for such freedom to peddle distortions.



Lamarck's ghost rises again

Jim Ring

Attacks on Darwinian evolutionary theory have come from within the scientific community as well as from creationists. Much of this is the normal process of scientific scrutiny, but some bear all the hallmarks of pseudoscience.

LAMARCKIAN evolution is a term commonly used to denote the inheritance of acquired characteristics. This is in contrast to Darwinian evolution, in which such inheritance is thought impossible. But neither Lamarck nor Darwin had any idea of how inheritance works.

Lamarck was the first to classify the invertebrate animals (he coined the term 'invertebrate'). He realised that species were not fixed, but did not set a single common ancestor for all living things. His theory of evolution involved groups of organisms each moving up a predetermined ladder and it clearly stated that the 'lower' organisms were the ancestors of the 'higher' organisms on each ladder. This type of theory is called 'orthogenesis' (sometimes 'teleology') or directed evolution. Lamarck's scheme differed in that the directing agency lay within the individual. Earlier theories had used 'God' or 'Nature' to control the direction.

In Lamarck's scheme all organisms had an inner tendency to strive for a higher level and they were able to somehow choose which characteristics they passed on to their descendants (except perhaps for humans, who were already at the top). This is rather

mystical so Lamarck suggested that use or disuse of various organs was an important factor for selecting what should be passed to the next generation. Clearly this is unsatisfactory (as was pointed out at the time). A caterpillar may 'use' legs to crawl away, but in what sense does it 'use' its protective colour or unpleasant taste? In what way would a brilliantly coloured insect with pleasant flavour 'disuse' these characteristics? For a



How does a caterpillar 'use' its protective coloration?

caterpillar these factors are more important than legs for escaping predators.

Several terms (translated into English) originate with Lamarck; invertebrate is one and biology another but also higher and lower organisms, and missing link.

These latter terms are inappropriate in Darwinian Theory.

It is commonly believed that Darwin started a new theory showing that acquired characteristics were not inherited. Not so; The Origin of Species first produces overwhelming evidence that organic evolution has occurred and then suggests a new theory, Natural Selection, as its mechanism. Knowing nothing about heredity, Darwin produced a theory that was independent of how inheritance was achieved; it made orthogenesis unnecessary. In recent times natural selection has been used as an explanation outside biology where genetic inheritance does not apply (a clear indication that it is not dependent on a single type of inheritance). Daniel Dennet calls it Darwin's Dangerous Idea.

However, natural selection must be the most strongly resisted theory in science. The implications of the theory are so horrifying that many (including biologists) have felt it *must* not be true. It implies, as Dawkins put it, "Nature is not cruel, not kind; merely indifferent." Natural selection does not

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ET gone home

THE disappearance of UFOs and little green men has been reported on once more, this time by the Dominion Post (3 April – see NZ Skeptic 77).

Ben Macintyre notes that these days UFOs have all but vanished. Since 1955 America's UFO Reporting Centre clocked 125,000 sightings but in recent years the figures have dropped dramatically. The British Flying Saucer Bureau closed down three years ago after 50 years of saucer spotting. "Why is this?" Macintyre asks, and decides that the withering of the UFO craze represents a shift in human credulity. We're spending too much time on the internet. He concludes that ET has gone home.

Something in the skies after all?

Britain's defence intelligence chiefs, however, still apparently believe there's something out there that requires an explanation (Dominion Post). After a four-year enquiry, scientists at the Defence Intelligence Staff have concluded most sightings can be explained by a little-understood atmospheric phenomenon – glowing 'plasmas' of gas created by electrical charges, which are sculpted by airflows into aerodynamic shapes which appear to fly at extraordinary speeds.

The scientists say such plasmas can play tricks on the mind, and have "been medically proven to cause responses in the temporal

lobes of the brain". As a result, UFO witnesses may be suffering from "extended memory retention and repeat experiences" induced by the plasmas.

The report recommends the findings on UFOs could be developed for "novel military applications" and alleges Russia is already investigating such weapons.

Other phenomena which could be explained by plasmas derive from the way the space between two plasmas sometimes forms an area "from which the reflection of light does not occur", giving the impression of a black craft, often triangular and up to hundreds of feet in length. And because the plasmas are electrically charged, they can change shape or colour if hit by another energy source, such as a radio signal sent by a UFO spotter. "This has led 'ufologists' to imagine that an 'alien response' is being given to their signals."

Then again, maybe the alien spacecraft hypothesis sounds quite plausible after all.

Clairvoyant consultation cops criticism

Meanwhile, in Australia, a police officer has been suspended for consulting a clairvoyant while investigating a death threat against the prime minister, says the Dominion Post (10 April.) The Australian Federal Police does not condone the use of psychics in security cases, a spokesman said.

Ark to sail again

A 47-year-old Dutch Christian is recreating a ready-to-sail replica of Noah's Ark, says the Dominion Post (15 April.) Johan Huibers lamented that children were no longer being taught the story of Noah's flood and decided to build a modern ark out of cedar and pine. The idea came to him in a dream 30 years ago.

The modern ark is about one-fifth of the size of the biblical boat and is a 50m-long, 13m-high structure built on top of a steel barge, though it looks like the ark mentioned in the Bible.

Mr Huibers started the project at the beginning of the year and plans to launch it in September, sailing through the Netherlands' canals and waterways. It will feature animals housed in stables, a petting zoo and re-enactments of the flood. They will also find space for a gift shop and a restaurant.

Hamilton haunted

The Frankton Hotel, the Station Cafe at Waikato University, and commercial offices in Kent St are just some of the haunted buildings to be found in Hamilton, according to the Waikato Times (June 23).

And other Waikato centres are not without their spooky side: Cambridge has at least two haunted sites, including the Masonic Hotel, and many guests and staff at the Waitomo Hotel claim to have witnessed paranormal events. Not one but two ghosts are believed to be responsible

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RIGHT AWAY!

– one a young girl who died when a pot of boiling fat fell on her, the other a Maori woman who fell in love with a British soldier and was mistakenly shot by a sentry as she headed for a romantic tryst. Presumably she spent the time between the Land Wars and the hotel's construction in 1928 haunting some other locality.

Some scientists are open to the paranormal, the article reported. Waikato University associate professor Richard Coll said science usually regards ghosts as figments of the imagination, and that mediums are either charlatans or well-intentioned but misguided. "However our own work suggests that individual scientists are far more flexible and open-minded than these blunt stances would suggest."

Dr Coll said many scientists were not prepared to discount the existence of ghosts.

"They would look for a more conventional explanation first but were still open to the possibility such things might exist."

Nostradamus a footie fan?

The reputation of Nostradamus may have suffered a knock after he was widely reported to have picked a Spanish victory in the football World Cup, as related by Spiro Zavos on National Radio, 24 September. The quatrain in question allegedly runs like this (with minor reported variations):

At the end of the sixth month of 2006, the King of Spain will cross the Pyrenees with his army.

The legions of Beelzebub await the battle on the central European plains.

Destruction and defeat will fall on the evil-doers.

The Holy Grail will be returned to Spain by the triumphant King.

Follow-up stories in the wake of Spain's defeat by France have been strangely lacking.

But supporters of the famous seer have a way out. Like the quatrain doing the rounds in the wake of September 2001, this 'prophecy' is obviously bogus. None of the news reports cite the number of the quatrain, Nostradamus almost never gave precise dates (other than for the King of Terror who was to come from the sky in July 1999) and, the biggest giveaway, this verse actually appears to make some sort of coherent sense.

How about God then?

The Church of England, plainly unfazed by such prognostications, has had more than 4000 visits to the prayers section of its website after it posted two prayers in May calling for God's blessing on the England football team. This represented a 28 per cent increase in visits compared with the previous four months. "The church often provides specially written prayers to mark major national events, and the World Cup is no exception," a spokesman said. "After all, you don't find many atheists during penalty shoot-outs."

Given England's performance in the penalty shoot-out against Portugal it's obvious God wasn't paying attention.

Look gorgeous, live forever

The Herald's Sideswipe column (April 26 & 27) has had quite a bit of mileage out of Alex Chiu. Says Chiu's website: "The Eternal Life Rings and The Eternal Life Foot Braces ... are believed to allow humans to stay physically young forever or turn humans physically younger, (Our lawyer told us to use the word 'believe') as long as you wear the rings or foot braces every night during sleep."

Sideswipe was also taken with Chiu's Gorgeous Pill, which "pulls your entire body together, increases Chi energy and circulation to all organs, and gets rid of Chi blockades around the body. The human body is very much like a sex balloon doll. The air is its Chi energy. Without enough air, the doll will look ugly because its body or its face will not be in perfect shape."

Prayer may make you sicker

A NZ\$3.8 million study on the therapeutic power of prayer has found that cardiac bypass patients who were prayed for did no better than those not prayed for (Dominion Post, 24 April). What's more, during the month after surgery patients who knew they were being prayed for had more complications than those who didn't know they were being prayed for. The study was funded by the John Templeton Foundation, which encourages the study of spirituality and science. A prioress involved with the study responded: "It tells me, frankly, that God's way of working with people is a mystery and that technology really can't determine the effects of prayer."

Larry King Live talks to the dead

During a short visit to Texas, my wife Hazel and I caught a session of Larry King Live, on which 'psychics' battled skeptics. It was clear from the outset the production was heavily biased towards the psychics. Three of them were in the studio with King, shoulder to shoulder. The two skeptics were on video feed, separately.

Let me declare here I've never liked King's style. This episode confirmed my suspicion he is the master of the non-searching question.

The psychics tumbled over themselves to claim they were providing a service, giving closure to the bereaved and that because so many people used their services, they must be legitimate. They (literally) shouted their honesty and sincerity over and over.

One of the skeptics was professor of ethics at a major university. The other was a rabbi whose specialty was sociology. Their air time was probably less than 10 per cent of the programme, and they were often on split-screen, with one of the psychics being a distraction or simply talking over them. The only time King called for order was so the show could break for commercials.

One psychic, a woman named Brown, had been challenged by James Randi to undergo his test for a million dollars. Her response was to claim he hadn't the money. Randi sent her a cer-

tified copy of the bank account by courier, but she refused to accept delivery. The professor managed to get this information on screen and the bank statement was shown on camera, proving it stood at over one million dollars. Brown was asked if she would now take the test and said, "No, it's a lose/lose situation." King didn't ask her why, the other rascals raised a hullabaloo and the subject was dropped.

The middle miscreant, sporting a beard, tried to convince viewers he was invaluable to police forces around the country because he had cracked case after

Then came a phone-in session. The first call asked the bearded rogue to find a missing family member. He simply said, "stay on the line and we'll talk after the show." The rabbi said bluntly this was a job for the police. The next caller asked if a late uncle liked the new colour of his house's hallway. "Oh yes, the psychic replied, "he is very happy with the colour you have chosen." She was not asked what the colour was. The rabbi commented, "With all this power at your disposal, you waste it on the colour of a house hallway?"

The same psychic then offered to provide the name of the person of concern to the next caller.

I turned to Hazel and said, "If it's a man, he's John, if a woman she's Margaret."

Sure enough, she saw a letter M amongst others and the caller made an encouraging sound. "M, A?" Yes. "M, A, R?" Yes. "It's either Mary or Margaret?" Margaret, said the caller. Blonde smiled at the camera and the whole show faded out, on a classic cold-reading.

On another topic (or is it?), in NZ Skeptic 78, a letter of mine was one of only three published in the Forum. Each of the other two was written by a Howard. (*Gasp, it's almost happened again! -ed.*) When Hazel and I met, her name was Howard. Three out of three. What are the odds? Spooky, don't you think?

Clive Shaw

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Just to show what good sports we are, we're not even going to charge for reprinting this advertisement. Submitted by Brian Batson, with the comment: "Just think of all that funding wasted on the human genome project, when the answer was just a phone call away."

case. When asked to name a few, he claimed they were all too sensitive to mention. Again, King didn't follow up. Fortunately, our professor managed to put it on the record that no police force has ever acknowledged the assistance of any clairvoyant, and made the point that psychics have been known to interfere in cases by employing private detectives to find information they can then present as their own brain-storming.

New Zealand Skeptics Conference 2006

King's College, Golf Ave, Otahuhu, Auckland

7pm Friday 29 September – 2pm Sunday 1 October

Special celebration: 20th anniversary of NZ Skeptics and auspicious 13th anniversary of our esteemed Chair Entity, Vicki Hyde.

THIS year the programme is designed to suit the young (adolescents up) and young at heart. It combines critical thinking with serious fun. As well as our regular members we hope to attract new participants – pass the word to family and friends that this conference will appeal to all ages from high school upwards. The programme includes a High School competition kindly sponsored by Real Groovy (see page 19).

Facilities at King's include superb chefs, comfortable single or double bedrooms with en-suite & use of recreational facilities (full-sized heated swimming pool, gymnasium, pool tables, squash courts, table tennis).

See www.skeptics.org.nz/SK:SKEPCONFDRAFTPROG for the full programme. On Friday night philosopher & performer Jonathan McKeown-Green and team will run an interactive, multi-media session. Their aim is to persuade you that

we make mistakes in our thinking and that it matters. However, you should not be persuaded too easily.

Saturday and Sunday have presentations from an impressive array of speakers including leading professionals in the fields of astronomy, medicine, pharmacy, veterinary science, biology and much more. Topics include herbal potions, electronic chain letters, mad cows, bad doctors and other wierd and wonderful riveting nonsense. We will see rare footage of early fire-walking Skeptics. Saturday night is the great celebratory feast. After dinner NZ's own comedian and satirist Te Radar will entertain us with his ponderings on "Why I fear horoscopes: a cynic confronts his scepticism of his own scepticism".

Earlybird registration until 1 August.

If you are only ever going to come to one Skeptics conference, this should be it!

forum

Lily the Pink

In the latest issue of the Skeptic journal, the Snake Oil article refers to a Lydia Pankhouse. This is incorrect. The lady's name was Pinkham. A full song about the lady can be found at www.thebards.net/music/lyrics/Lily_The_Pink.shtml

Rudy Sunde

the volume of a cuboid – or box – measuring 11 by 7 by 3 inches. So a US quart or quarter gallon is the volume of a box measuring 5.5 by 3.5 by 3 inches. This already sounds like something of the same order as the familiar litre carton, and turns out to be about 10 per cent short of a litre.

Kris Howard

Quarts, anyone?

Bernard Howard (NZ Skeptic 79) asks if readers can visualize a US quart.

A US gallon is defined as 231 cubic inches, in other words,

Bernard Howard replies:

Dear Kris,

Thanks for your email. I am strongly against any attempt to visualise US quarts. The sooner

they join bushels, rods, poles and perches in well deserved oblivion, the better.

I knew a man once who liked to convert all speeds, whatever the units used, into furlongs per fortnight.

Why 231 cu in? At least the Imperial gallon was defined as the volume of ten pounds of water, which has a semblance of logic to it.

Yours pedantically,

Dad



Doctors challenge alternative medicine

John Welch

MEMBERS of the Royal Society and other eminent doctors have written to every hospital in the UK urging them not to suggest anything but evidence-based medicine to their patients (Guardian Weekly Vol 174 No 23). This was a timely reminder given that Prince Charles had just been urging the World Health Assembly to promote alternative medicine. The letter writers reminded people that alternative and complementary medicine needs to be evaluated on the same criteria as conventional medicine. This was precisely the same argument most of us took when making submissions to MACCAH.

Despite these caveats the government has seen fit to fund Maori traditional medicine. Why stop there? I would like to see us adopt Tibetan traditional medicine. This could be the money spinner I've been looking for. Tibetan doctors believe disease is always present in a latent form and this gives us the entire population as a patient base. Once convinced of their 'latent' disease they can be treated until 'cured'. For example, hepatitis responds well to white sugar

which is 'cool' but not to raw sugar which is 'heating'. The effect of this treatment is to cool the bile. Did you know that as well as the traditional humours there are five sub-groups of bile? Decision making and decisiveness are controlled by the third or 'determining bile'.

British Veterinary Voodoo Society

Homoeopathic vets have been upset at this website which satirises the use of complementary and alternative treatments for animals. There was recently some correspondence in a magazine about such treatment and the Letter of the Week was from a correspondent who pointed out that animals couldn't have a placebo response, therefore such treatments must work. So there! What this idiot savant forgot was the fact that animals, like humans, recover from most afflictions without any treatment at all.

www.vetpath.co.uk/voodoo

It makes perfect sense to target animals as well as their gullible

owners. There are now magnetic products such as a magnetic dog collar and a magnetic disc which is attached to any animal's water bowl. It will provide 300 Gauss for the 'fortunate pet'.

www.magnetictherapy.co.uk

What we need in New Zealand is a 'Medical Voodoo Society' to cater for all those doctors who think it trendy to adopt unproven treatments.

Medicalisation of Behaviour

A private surgeon is calling for the government to fund 2000 gastric bypass operations as a solution to the obesity problem. At \$22,000 this will cost the health system \$44 million which it can ill afford. Obesity is a self-inflicted behavioural disorder. As a student of human nature I have noticed that obese people are always eating and by force-feeding their children they ensure that they develop in their own image. This is nurture, not nature. Observational trials have shown that obese people overestimate the amount of exercise they do by 50 per cent, a fatal

self-delusion for a group who also under-estimate the amount they eat by 50 per cent.

It's possible that this proposal could be supported on a strict actuarial basis as the cost may be more than offset if it reduces other health costs and the person gets back to work. On the other hand, this is a prime example of what Ivan Illich was writing about in *Medical Nemesis*, where he predicted that medicine would seek to expand its influence into more and more areas by medicalising human behaviour.

Dominion Post 7 June

Junk Science

There are many claims that altering diet can alter behaviour. Careful trials have disproved this and shown that any effect is due to change in management rather than any dietary manipulation. I recall attempts to treat prison inmates with dietary interventions. They failed and now a wealthy British businessman is funding a £250,000 trial of "juggling and standing on one leg while throwing and catching a bean bag." It is claimed that such exercises stimulate the cerebellum. Inmates who volunteered for the programme have shown a "remarkable improvement".

Of course they have! They were probably excused their normal boring routines and as any researcher knows, 'volunteers' are a completely different group to a randomly selected set.

The whole process is typical of failed corrections policies the world over. In NZ we have people braying for more punishment

which doesn't work. The majority of prisoners have addiction problems and literacy problems and unless these issues are addressed our prisons will continue their inexorable expansion.

Dominion Post 7 June

Chiropractic Nonsense

A local paper carried an article about a man who had a chronic pain syndrome after an accident.

While in the US he visited a chiropractor who practises the 'Blair Upper Cervical Technique' whatever that is. It involved measuring the temperature of the neck and the patient reported "that in the accident, some of his vertebrae had been pushed upwards into his skull and jammed. This had affected his main blood supply."

The results of the test showed he had been getting colder and colder to the extent of using five cords of wood the previous winter! Following treatment he sat in a chair and could feel his left leg getting warmer and warmer.

I don't think we should be critical of this man. He was vulnerable to quackery because of the state of his health and desperate to obtain relief from his disability.

Our criticism should be of a health system that allows such nonsensical treatment which is basically consumer fraud. ACC continues to fund both chiropractic and acupuncture treatment despite both modalities having been proved useless.

Thermography

I recently received in the mail a booklet promoting thermography as a breast cancer screening or diagnostic tool. Thermography involves measuring heat distribution on the skin in the form of an image. The theory is that cancer involves increased blood flow and therefore breast cancers should show a 'hot spot'.

The booklet was addressed to my "practice nurse". I am sure that this tactic was a cynical and deliberate ploy because most doctors would not have anything to do with promoting thermography and on reading this nasty little booklet would recognise it for the pseudoscientific rubbish it is. Here is one example of the nonsense it contains. "The following thermogram is of a 51 year old mother who had breast-fed 3 children. It also shows a 'hot spot' in the left jaw where a persistent dental problem had been experienced for several years. The diseased tooth on the breast meridian was removed just before the lumpectomy that then confirmed her left breast cancer."

This is an attempt to tie in acupuncture meridians with cancer. The rest of it is the usual diatribe against conventional medicine and various conspiracy theories. A radiologist sent two breast cancer patients for examination and thermography failed to detect either case.

What I find really objectionable is that this booklet was funded by a "generous grant from the Alison Roe Trust." The trustees deserve criticism for funding this rubbish.

The Cancer Society has produced a position statement on thermography. Follow the link to their website which has a number of similar papers worth reading.

www.cancernz.org.nz

lamarckism

From Page 9

rule out the possibility of a creative supreme being, but it does rule out a Christian style god that takes a benign interest in the living organisms it has created.

We all know that people have challenged the facts of evolution for religious or political reasons, but for a century or more these challenges have come from outside science. Most opposition to natural selection has come from within science, even though religious belief may have been the motive. A very large number of eminent biologists have opposed natural selection and some of these had no religious faith. Even TH Huxley was unhappy with the theory and concentrated on the facts of evolution. Nearly all the challenges to natural selection have involved some form of orthogenesis.

Many of the attacks on Darwinism in the past 50 years or so have come from Marxist biologists who let their politics overrule their science. Some of these biologists were outraged when natural selection was applied to humans, particularly to human behaviour in the discipline originally called sociobiology. For a

Goji Juice

Why do all these juice projects have such silly names? Remember Noni juice? A member forwarded details of the latest dietary product to receive the attention of business types. Have a look at www.gojiforlife.co.nz

The website is slick and the product is being promoted as a marketing opportunity. New Zealand must have some plant product we could promote as a business opportunity. Ideas anybody?

really excellent overview of this controversy read Defenders of the Truth by sociologist Ullica Segerstråle.

Attacks on natural selection still occur. Unfortunately any

Most people find it difficult to see that on some issues only one side constitutes science.

challenge to Darwin, however ill-informed, still generates publicity even among those who should know better. For example, in January 2004 New Scientist headlined yet again Why Darwin Was Wrong About Sex. The article reveals another author who does not really understand Darwinian Theory. My wife (who many years ago taught biology) used to say: "Few people claim to fully understand relativity or quantum theory because these seem to be written in mathematics. But natural selection seems to be written in English so few realise that a deep understanding of biology is necessary for its appreciation."

I sometimes feel that people who write essays claiming that Darwin was wrong should demonstrate that they have read the collection of essays by John Maynard Smith titled Did Darwin Get It Right? before any editor puts their effort into a publication with claims to be scientific.

The Croizat Affair

There was a disgraceful episode in the biology departments of some New Zealand universities around 20 years ago when a few zealots discovered the ideas of a fringe scientist called Leon Croizat and promoted a 'new' theory of evolution. "Croizat believed that evolution had an internal direction that was independent of selection by environmental factors" (Gordon Hewitt 1984). There was actually nothing new about this at all; it was a form of orthogenesis. In fact it closely resembled Lamarckism because the directing agency lay within the organism. The proponents confused the issue by concentrating on Croizat's insistence that vicariance was more important than dispersal in explaining the geographical distribution of living organisms.¹

¹To quote from a textbook: vicariance is the fragmentation of widespread distribution that results from mountain building, rising sea levels and other disruptive events on regional or global scales. Dispersal occurs when individuals colonise new regions as adjacent areas become more favourable or previously separated habitats connect.

This is pretty academic; probably few biologists were interested. But Croizat's claim that orthogenesis rather than natural selection was the guiding principle of evolution would have been extremely important if true. It would have overthrown Darwin's ideas and produced a true revolution in science.

Plenty of wacky ideas have gained support in universities and controversy is healthy. However, within science it is essential that work is published in peer reviewed journals – and discussed at international science congresses. Scientists generally ignore their fellows who espouse nutty ideas without attempting publication in the professional literature. And this works well, as many daft ideas simply disappear.

Fair-minded people generally believe that every story has two sides. Combating pseudoscience in the ordinary media gives the public a false impression, as most people find it difficult to see that on some issues only one side constitutes science. Unfortunately there are cases, especially in medicine and education, where it is necessary to engage pseudoscience in the general media. Outrageous claims made by somebody with scientific qualifications cannot be safely ignored if they have an effect on society.

In the Croizat case his New Zealand supporters, unable to make any headway with their peers, bombarded the poor biology teachers with (mis)information urging them to teach the 'new theory of evolution' that was bound to supplant Darwinism. An attempt in this manner

to short-circuit the normal processes of science is a sure sign of charlatanry. It is worth noting that the 'new' theory (bound to supplant Darwinism!) seems to have sunk without trace.

For anybody with interest there is some debate in NZ Science Teacher from the 1980s with Keith Lockett (the first editor of this publication) and myself on the side of Darwin, and JR Grehan on the side of Croizat. Gordon Hewitt tried to remain neutral.

My letter to the NZ Science Teacher suggested there were some signals that would identify an article as probably pseudoscience:

- Its title is inappropriately grandiose.
- Its style is emotional.
- It has a touch of paranoia.
- It contains an enormous reference list – sufficient to daunt the most determined reader.
- On analysis the list contains a high percentage of references to the author's own works, or to the works of the 'group'.
- The majority of references are to relatively obscure publications that are difficult to track down.
- Those few references to well known authors or publications are generally ancient.
- Readers are urged to get their ideas up to date – indeed to get ahead of the crowd.

The article by Grehan fitted all these criteria (his reference list was extraordinary), and should have been rejected by the editor.

Perhaps the most amazing aspect of this affair is that when it started, evolutionary theory had just had its most productive period since Darwin. Far from being a theory in crisis, or due to be supplanted, natural selection had triumphed over all its rivals. In the previous two decades George Williams and Maynard Smith had used game theory to show that group selection was impossible in the long run. Then Hamilton put selection on firm mathematical grounds (he should have got a Nobel). Richard Dawkins popularised these ideas.

All this occurred nearly a decade after Dawkins' first book so the new ideas were not buried in obscurity. Yet they were ignored by the group. In nearly a century and a half of existence, natural selection has seen off more rivals than any other theory, while the last quarter century or so must represent the final triumph for Darwin, with his theory being extended much further than he could have imagined.

The Croizat group in New Zealand claimed that he had made remarkable progress in Biogeography. *The Secular Ark* by Janet Browne is a history of Biogeography and worth consulting to see the falsity (and absurdity) of this claim.

I would like to thank Peter Joyce for his comments on an early draft of this article and pay tribute to the memory of Keith Lockett. He and I were involved in several struggles against pseudoscience in education before NZ Skeptics was formed.

Jim Ring is a Nelson skeptic.

Zetetic Astronomy and other madness

Raymond Richards

In the 21st century, there are still people who believe the Earth is flat.



MAD people are among us. Reading letters to the editor and discussing issues at universities can be frustrating exercises because some people are oblivious to facts and reason. Some odd people, including radical postmodernists, are proudly hostile to science and empirical evidence. They say there are no facts, only perceptions. They describe scientific method as a mere ploy, used by elites to claim falsely that they are in sole possession of knowledge. Views that are based on empirical evidence supposedly are products of a paradigm that is no more valid than any other way of arriving at a belief.

Academics, who are reputed to have great intellects, can flaunt lunacy. I once heard a paper on religious history where the speaker tried to justify her weird conclusions by saying, "Of course, there are nonrational ways of knowing." A university dean once urged me not to contradict the fanciful claim of the Mormon Church that a lost tribe of Israel settled America; Latter Day Saints have their own paradigm, which we must respect, she said. Another academic insisted that I should be charged

with harassment if I told a group of Polynesian students that their culture's belief in a flat earth is false.

It is hard to believe that some first-world people think the world is flat. After all, belief in a flat earth is so ridiculous that it is sometimes used in debates as an obvious example of pseudoscience or dogmatic thinking. Yet, apparently some Polynesian people are Flat Earthers, and the internet includes sites devoted to promoting this theory. There is no way of knowing how many of these sites, if any, are genuine. Given the lunacy on show in letters to the editor and universities, however, it would not be surprising if some of the writers are sincere.

Trying to follow the reasoning of Flat Earthers is instructive for Skeptics because it shows us what we are up against. Years ago, I came across a couple of books that astounded me because their authors were so immovable. One book was written by a Catholic who had an answer to every accusation ever hurled at his religion. No matter what the objection – the cruelty of the Inquisition, papal collusion

with Nazism, the corrupt selling of indulgences – he staunchly made the case that the Catholic Church was God's true church. The other book was a course in selling life insurance. No matter what objection the prospective customer raised, the book gave the insurance agent a model answer. For example, if the potential buyer objected that he could not afford insurance, the salesman was to tell him that he could not afford not to have insurance. Chiropractors take a similar line. No matter what the symptom, a regular crack of the back is the recommended treatment.

Today's Flat Earthers sustain a line of argument that was started in the mid-nineteenth century by the English inventor, Samuel Birley Rowbotham (1816-1884). Starting with a pamphlet in 1849, he developed his ideas over three decades into a 430-page book, *Earth Not a Globe*, which he published under the pseudonym Parallax. Rowbotham insisted that the Earth is flat, with the North Pole at its centre. The land is surrounded by a waste of ice and snow, bordered by a huge, circular cliff of ice. The Sun, the Moon and the planets – in fact, all celestial bodies – also

are flat. The Sun and Moon, each about 50km in diameter, circle the Earth and are only several hundred kilometres above us. Each functions as a spotlight, with the sun radiating hot light, the moon sending out cold light. Because they are spotlights, they give out light over only a limited area at a time, thus explaining why some parts of the Earth are dark when others are in light. Rowbotham called his model Zetetic Astronomy.

He was a tenacious debater, and modern followers of Rowbotham continue his practice of never being stuck for an answer. Doesn't Nasa have photos to prove the Earth is a sphere? No, Nasa is part of a conspiracy; the photos are fakes, made by computers.

How do satellites orbit the Earth? They don't. Satellite signals come from radio towers.

What about gravity? Well, the Earth is accelerating upward, as is every celestial body. This movement produces the effect known as gravity.

Debating Flat Earthers is a waste of time. So, I suggest, is arguing with Creationists, New Agers and other mad people. Their crazy minds are set. Our efforts will be most fruitful when we aim at educating people who are open to sensible ideas. Thankfully, that includes most of the population.

Dr Raymond Richards is a senior lecturer in History and American Studies at Waikato University. He can be reached at ray@waikato.ac.nz

School competition to promote critical thinking

The New Zealand Skeptics have launched a competition to encourage critical thinking among Auckland high school students. Entrants are to submit a 100-word summary outlining their proposal for a 10-12 minute presentation on some topic relevant to skeptical inquiry. Suggested topics include:

- Are we sensible about science?
- The biggest superstition today is...
- How can we tell what is science and what is pseudo-science?

- What do students learn about critical thinking?

Short-listed entrants will make their presentations in late August before a judging panel who will invite the best three to present their talks at the 2006 Skeptics' Conference. Power point or overhead projection slides may be used, but talks without visual aids are also welcomed.

Prizes for first, second and third places are vouchers of \$250, \$100 and \$50 for Real Groovy's selection of books, music, DVDs and games. Further information is available at www.skeptics.org.nz/SK:SKEPCONFERENCE

Australian Skeptics National Convention Melbourne, Australia 18 & 19 November 2006

**Science, Truth and the Media
Details & Registration at
www.skeptics.com.au/convention/2006/**

There is a feeling in the science community that science and technology is handled badly by the media. Although science and technology have a major influence on modern society and its importance is acknowledged it is underreported in the media. There is an emphasis on the sensational and the paranormal. Speakers at the convention examine how the media deals with some science issues.

Speakers will include:

Paul Willis, presenter on Catalyst, a science program on ABC TV

Leigh Dayton, science journalist with The Australian, the national broadsheet newspaper

Peter Pockley, science journalist with Australasian Science a monthly science magazine.

There will also be speakers on the cosmetics industry and global warming.

The convention dinner is to be combined with the Inaugural Awards Dinner for the Australian Skeptics Prize for Critical Thinking. The dinner will be at The Windsor Hotel, one of Melbourne's leading hotels.

If undelivered, return to:

NZ Skeptics
PO Box 29-492
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Permit 

The Conference is coming!

The 20th New Zealand Skeptics Conference is in Auckland this year, and runs from 29 September to 1 October. Details and registration form inside.

Be quick! \$25 discount for earlybird registrations before August 1!

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