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Meteorological Society Of New Zealand (Inc.)

NEWSLETTER 104

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March 2006 Newsletter

President's Note

In the December Newsletter, Trevor McGavin wrote a note saying that he will no longer be writing up his Notable Recent Weather article (a regular contribution over the past 18 years!). I am sure you will all agree that Trevor's article has been a highlight of the newsletter over the years. At our last committee meeting it was noted that, in addition to eagerly awaiting Trevor's article for reading at leisure, many people in the society also found the Notable Recent Weather articles extremely useful as references when investigating historical events. On behalf of the Meteorological Society, I would like to thank Trevor for his highly-valued contribution and wish him all the best in his future endeavors. In the meantime, we are hopeful that we will be able to find someone (or a group) willing to take on this task. Bob McDavitt in Auckland, Ben Tichborne in Christchurch and Peter Little in Wellington have kindly agreed to hold fort at least in the meantime.

Until next time,

Kim Dirks

The committee also extends good wishes to Frank Drost, he his shifting to Australia in pursuit of a job in paleo-climatology. *Frank says "I would hereby again wish you all the best for the future. I have enjoyed being part of the MetSoc committee. I surely have learnt a lot about atmospheric science the last few years, but thanks to MetSoc, I also became familiar with New Zealand's history and interest in meteorology. Although I have to step down as secretary of the Society, I intend to remain a member to the Society, so I am afraid that you might have to stuff one more overseas envelope. I suppose that means I have to pay a bit more for my subscription. But since my position at UNSW is initially for 2 years, but with possibilities to extend it to 4 years, I will always have to leave Australia after that period, and so expect me back again in a few years. Regards en Tot Ziens!"*

(Simon Kjellberg has agreed to act as our replacement secretary).

Regional Reports.

Auckland (Kim Dirks)

On March 9th, the Auckland Branch held their first meeting of the year. Fifteen people turned out to hear three presentations on some of the topics being studied by the Atmospheric Physics Research Group of The University of Auckland.

Glenn Manley kicked off with a presentation on the measurement of rainfall at the Ardmore Field station. His work involved comparing the rainfall measurements obtained by instruments including two types of rain gauges, x-band weather radars, impact distrometers and web cams. The emphasis of the talk was on the practical limitations associated with each of these techniques and the challenges they present with time synchronization.

David Wing then talked about mesoscale atmospheric modelling on Mars with an emphasis on katabatic flows. The limited extent of the synoptic flows and the 9km depth of the Vallis Marineris (Mars' massive valley system) make Mars an interesting study location. We were also presented with spectacular images of the valley, dust storms that appeared to originate from the base of the valley as well as video clips of martian tornadoes.

Geoff Austin then spoke on 'Clouds in the year of Einstein'. Geoff first became interested in meteorology as a child when he started wondering about why clouds remain suspended in the sky despite the much higher density of rain compared with air. We were given a historical perspective of the importance of having good communication between theoretical and experimental scientists and the importance of each having a good understanding of the other for progress to be made. We also had a chance to view the spectacular video clip obtained of a tornado that recently passed by the Ardmore field station that was captured on one of the weather radars.

Wellington (Jim Renwick)

Don Grainger gave a talk at NIWA in Wellington on Friday 24 March.

CHRISTCHURCH (Peyman Zawar-Reza)

On 27th February David Thompson from Colorado Sate University gave a talk on "The impact of the Antarctic ozone hole on climate change at the Earth's Surface."

The observed climate change of the past few decades is characterized not only by increases in global mean temperatures, but also by substantial changes in the atmospheric circulation. In the Southern Hemisphere, the changes in the atmospheric flow are dominated by a poleward contraction of the westerly winds around the Southern Ocean. In his talk, David reviewed the observed climate change in the Southern Hemisphere and present evidence that suggests the trends are consistent with forcing by the Antarctic ozone hole. The attendant implications

for surface temperatures and precipitation over New Zealand were discussed.

On 7th March, Dr James Harle, from National Oceanography Centre, University of Southampton gave a talk on "An overview of the UK High Resolution Global Environmental Modelling (HiGEM) project"

On Thursday 30th March, Dr David Vaughan from the British Antarctic Survey presented a Gateway Antarctica Lecture on "Antarctica and Global Climate Change" David is a world expert on the effect of global change on the Antarctic ice sheets and the recent disintegration of Antarctic ice shelves.

Dunedin (Helen Power)

Dr David Vaughan, a geophysicist from the British Antarctic Survey spoke to the Society on March 31.

Dr Vaughan was in NZ the last week of March, visiting Wellington, Christchurch, and Dunedin. He spoke at the Climate Change and Governance conference in Wellington. Dr Vaughan's research foci include the role of ice sheets in the Earth system, and the societal threat of climate change and rising sea levels. He was a lead author on the third and fourth IPCC assessment reports, and is a recipient of the Polar Medal for services to Antarctic Science.

His Dunedin seminar was on 'Antarctica, climate change, and sea level'. The event is co-sponsored by the University's Division of Sciences and has been advertised across campus, with local high schools (Heads of Science), as well as with the Society.

Wairarapa Weather Watchers (Alex Neale)

Fourteen members attended a meeting on Monday 13 February. There was a follow-up in the Battle of Trafalgar story that was featured in our December meeting. Interestingly, the Antiques Roadshow on TV1 had also featured the Trafalgar museum about a week before, and that had been seen by some members.

Concluding the Battle of Trafalgar story was the fact that news of the British victory and Nelson's death were carried back to the Admiralty in London by the HMS *Pickle*. This is, at first sight, a strange name for a Royal Navy ship. Nobody at our meeting had an answer, do you?

Fourteen members met on Monday evening 14 March 2006. There was a review of the way forecasts are, or could be, presented to the public.

The difficulties of presenting forecasts of cloud, usually in the same presentation as actual cloud as observed from satellite. The latter are fact, whereas the former are, of necessity, schematic or probabilistic.

A review of the unusually active 2005 tropical cyclone season in the North Atlantic; 26 named storms (a season record), 13 hurricanes (a record) including 3 category 5 hurricanes (a record).

Finally the latest offering in the Wairarapa Times-Age (11 March 2006) from Ken Ring, about the impending vicious cyclone visitation - presented in a confusing (for the general public) mixture of Ken Ring's predictions and those attributed to MetService.

The Weather Watchers will not meet again until Daylight Time in October; however, the Newsletters will continue as usual.

NIWA Summer 2005/6

Of the five main centres, Hamilton was the wettest, and Wellington the sunniest. Rainfall was above average in Hamilton, below average in Auckland, and near average in the three other main centres. Temperatures were above average in all five main centres. Summer sunshine hours were above average in Wellington and Dunedin, near average in Auckland and Christchurch, and below average in Hamilton.

Rainfall

Summer rainfall was approximately 150 percent of normal in Bay of Plenty, Taupo, Wanganui, and parts of Southland. Rainfall was also above normal in parts of Coromandel, Waikato, south Taranaki, Nelson, and north Otago. In contrast, rainfall was below normal in parts of Auckland, north Taranaki, Hawke's Bay, Wairarapa, the Kaikoura Coast, inland south Canterbury, and Central Otago.

Temperature

Seasonal mean temperatures were above average throughout much of New Zealand, especially Bay of Plenty, Hawke's Bay, central Wairarapa, Horowhenua, Nelson, coastal Otago, and Southland.

Sunshine

Sunshine hours were above normal in Wellington, Westland, and coastal areas of Otago and Southland, and below normal in Waikato.

For full details

See http://www.niwascience.co.nz/ncc/cs/sclimsum_06_1_summer.pdf

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Climate Summary for Summer 2005-6

- Rainfall: Extremely high in Bay of Plenty and Taupo; normal or below normal in many other regions
- Soil moisture: Early significant deficits in eastern areas of the country, spreading to some other parts of North Island later
- Temperature: Above average overall with very hot conditions in central Otago on a few days
- Sunshine: Sunny in Wellington, Westland, and coastal areas of Otago and Southland

Summer rainfall was extremely high in parts of Bay of Plenty and Taupo. Many locations within these regions recorded more than 150 percent of (one and a half times) normal rainfall, and totals of 400 to 550 mm during the season. Rainfall was also well above normal in Wanganui, and parts of Southland. Rainfall was near or below normal in many other regions. Early significant soil moisture deficits developed in eastern areas of both islands, and spread in late summer to Northland, Auckland and Manawatu. The national average temperature of 17.2 °C was 0.6 °C above normal and the highest for summer since 1998/99, mainly due to an unusually warm December. Sunshine hours were above normal for summer in Wellington, Westland, and coastal areas of Otago and Southland. The overall summer climate pattern was mixed, being dominated by more frequent northerlies in December, westerlies over the South Island in January, and south easterlies in the northeast of the North Island in February.

Major Highlights

- The highest temperature recorded during the summer was 36.1 °C recorded at Alexandra on 29 January. The lowest temperature for the summer was -1.9 °C at The Chateau, Mt. Ruapehu on 24 February.
- There were at least three high rainfall/flood-producing events - one with damaging winds in the Coromandel, Thames/Hauraki Plains over 24-25 January, another in Rotorua on 28 January, and another in Bay of Plenty over 8-11 February.
- A mix of thunderstorms, damaging hail and a tornado affected Southland on 5 December, thunderstorms and a tornado in Taranaki on 6 De-

- ember, tornado-like winds and intense hail in Southland on 15 December, thunderstorms and damaging hail in Canterbury on 5 February, and tornado-like winds in Taranaki on 8 February.
- On 2-4 January, winds gusted to 165 km/h from the northwest at Mt. Kaukau; gales buffeted Wellington. Gales also blew in Southland.

NOTABLE WEATHER - SUMMER 2005/06

By Ben Tichborne

Thanks to Bob McDavitt and Trevor McGavin for providing statistics and weather maps to help to write and illustrate this report.

Summer 2005/06 was a mixed bag, with some notable spells of stormy weather. December was remarkably warm and humid (in stark contrast to the wintry December 2004), with much thunderstorm activity. By contrast, by February it was drier, though still changeable at times.

DECEMBER 2005

1st - Cool 14C maximums in Oamaru and Timaru, due to a cloudy onshore northeasterly flow.

2nd - Cool cloudy 14C maximums in Kaikoura and (again) in Oamaru.

3rd - A period of heavy rain on South Island West Coast. North or northwest gales about Cook Strait/Wellington and Castlepoint.

5th - Scattered thunder and hail in Canterbury and Southland. (marble sized reported in latter)

6th - Heavy showers and thunderstorms in many parts of North Island and a few in the north of the South Island. A small tornado does some damage in the Rotorua suburb of Fordlands in early afternoon.

10th-16th - Warm humid airflows over NZ with thunderstorms in many areas; some with very heavy downpours:

An estimated 30mm in 30 minutes in Taupo (11th),

27.4mm in an hour in Lumsden (10th),

Invercargill (13th - late afternoon following a warm 27C max)

Heavy downpours in Marton (with hail) & Palmerston North. (10th or

11th)

Downpours in Wanganui and Cape Reinga (13th)

Paeroa (24.6 mm in an hour on 15th)

Hastings (an estimated 52mm in 45 minutes on 15th)

Some damaging hail and whirlwinds at Heddon in Southland (15th)

Also, an unusually warm 27C max in Greymouth. (12th), and low cloud and fog disrupts Wellington Airport (13th)

16th/17th - Heavy rain in Coromandel and Bay of Plenty. More fog disrupts Wellington Airport.

18th - Fog clears from Wellington. Hot in Central Otago, eg 31C max in Alexandra; a record 29C max in Queenstown. Thunderstorms in east of North Island, also Bay of Plenty and Wanganui.

20th - Thunderstorms with very heavy rain cause flash flooding in many parts of Southland and Central Otago, including Invercargill, Gore (around 20mm in 30 minutes in both those places) and Queenstown. (lightning cuts the power to the Gondola at Queenstown) High intensity rain from these storms damaged Central Otago cherry crops.

Some thunderstorms also in western areas of both islands.

21st/22nd - Scattered afternoon thunderstorms in Canterbury. Lightning cuts power to Bell block in Taranaki. (21st)

23rd - Southerly wind change brings 15mm in 2 hours to both Christchurch and Wellington. Thunderstorm results in surface flooding in some surface flooding in Wellington.

25th/Christmas Day - Afternoon downpour at Westport. (25.6mm in an hour)

26th - Afternoon thunderstorm in Dunedin area. Lightning strikes water tanks in Mosgiel, cutting water supplies to township until noon next day.

28th - Some afternoon thunderstorms in central and western North Island. Sea-breeze convergence causes some heavy showers in parts of Auckland, eg Remuera and Mission Bay. (surface flooding) Also 24mm in an hour at Whitianga overnight.

30th - Hot 31C max in Ashburton; 30C in Alexandra.

31st - Hot 31C max in Hastings, prior to cooler southwesterly change in afternoon.

JANUARY 2006

1st-6th (see details following) - A period of stormy westerlies

7th-8th - Wet northwest flow brings 132mm in 36hours to Milford Sound and causes power cuts in Arrowtown.

10th - Hot 32C max in Kawerau. Briefly heavy rain in parts of Auckland, due to a sea-breeze convergence zone.

11th-12th - Heavy rain again about and west of the Alps, especially in Fiordland. A massive 450mm at Waihoa in Westland (49mm/hr at 1-2am on 12th) and 368mm at Cropp creek. Washout on Manapouri Road results in 200 tourists being airlifted from Deep Cove to Te Anau. Cool 14C maximums in Timaru and Oamaru in the wake of a southerly behind the front. (12th)

13th - Warm in Canterbury in a northwesterly flow, eg 31C max in Ashburton.

15th/16th - Cold squally showers in Fiordland and Southland, with some hail, and snow on mountains as low as about 800 metres. Easing by afternoon of 16th, as flow tends milder westerly.

17th - Heavy rain later in Fiordland.

18th - Heavy rain in Buller, Westland, Main Divide, and Tararuas (262mm to Angle Knob) Northwesterly

gales in Canterbury (overnight - gusts to 93kph in Lyttelton) and Central NZ. (gusts to 133kph at Mt Kaukau) Southerly change brings

rapid drop in temperature in east of South Island, eg Christchurch drops from 26C to 16C when the change hits about 10.30am.

23rd-25th - Low pressure system and stormy weather in North Island. (see details following)

27th - Hot in Central Otago, eg 35C max in Alexandra; 33C in Queenstown.

28th - Humidity builds in the north with dew points over 20C, leading to afternoon thunderstorms in central North Island, including a downpour which causes flooding in Taupo. (Taupo airport records 32.4mm/hr).

29th - Fog disrupts Wellington Airport for the greater part of the day.

30th - Hot in places, eg 36C max in Hanmer and Alexandra (36C maximums also on the two previous days in Alexandra); 33C in Blenheim, and 32C in Queenstown.

31st - Hot 33C maximums in Napier and Hastings; 32C in Christchurch; 31C in Ashburton. Spectacular evening thunderstorm in Marlborough results in many people driving to vantage points south of Blenheim (in the Wither Hills) to watch it.

Mean sea level pressure analyses for midday NZST and midnight NZST 9th and 10th February 2006 are shown here.

FEBRUARY 2006

1st/2nd - Uncomfortably muggy in northern half of North Island, with maximums in the high 20s (29C in New Plymouth and Kaitiaia) 31C max in Alexandra. (2nd) 29.2mm in an hour shower at Hamilton. (1st)

3rd - Some afternoon thunderstorms in inland parts of Canterbury and Otago.

5th - Cool southerly flow keeps temperatures well below average in east of South Island, eg only 13C maximums in Ashburton, Timaru and Dunedin.

6th - Afternoon thunderstorms developing in north of North Island. 1cm hail reported after one Waikato storm. Waterspout over seas just to south of Whangaparoa Peninsula.

8th - Some heavy falls of rain in northern and central NZ. Evening flooding (1m deep) in Lower Hutt from downpour. Twister hits Oakura

Park in Taranaki.

10th - Heavy rain causes flooding in BOP and Gisborne areas, including Matata. (see details following)

11th - A few thunderstorms in Otago and Southland.

12th - Thunderstorms on South Island West Coast, following heavy overnight rain. Waiho, Westland records 113mm overnight

19th - Hot 32C max in Alexandra.

20th - Morning Fog disrupts Christchurch Airport. Heavy rain in Fiordland, eg East Homer 81mm/13hr. 30C maximums in Hororata and Wai-para (northwesterly flow); also Kawerau.

22nd - A few thunderstorms in Otago and Southland, as colder south-westerly flow develops, bringing fresh snow to the mountains.

23rd - Cold, squally southerly spreads up eastern areas with some thunder and hail (eg in Christchurch, Wellington and Marlborough). Only 13C max in Dunedin. Lower Hutt drops from 21C to 12C in 1 hour around midday, as the change arrives. Blenheim plummets from 20C to 12C in 2-3 hours, with hail. Snow on South Island ranges (eg Kaikouras), reported as low as about 800m near Omarama and further south.

24th - Unseasonably cold start to the day after previous day's cold southerly dies out overnight and was replaced by clear skies and light winds. -1C minimum in Waiouru; 1C in Taupo; 4C at Christchurch Airport.

28th - Heavy overnight showers about parts of Canterbury (especially Christchurch and Banks Peninsula) with southerly gales for a time.

MAJOR EVENTS

A period of stormy westerlies - 1st-6th January 2006

After a warm, humid December, weather patterns changed significantly in early January, with a spell of much cooler airstreams from the westerly quarter, bringing stormy weather to many areas.

The first cold front swept over NZ on the 1st and 2nd, linked to an extremely deep low (below 950hPa) between New Zealand and Antarctica. Warm (32C maximum in Kaikoura) northwesterlies ahead of it reached gale in many areas, being worst about Central NZ. (160kph recorded at Wel-

lington Airport with power cuts around the city) Heavy rain fell about and west of the Southern Alps(around 200mm of rain fell at Cropp Creek, Westland), the Tararuas, and Mt Taranaki. Behind the front, a colder west to southwest flow on the 2nd brought thunderstorms to the west and south of the South Island.

Gales lashed the far south, with wind gusts to 176kph were recorded at Bluff and 180kph at Mid Dome in Southland. The winds toppled trees in Dunedin and caused power cuts in parts of Balclutha, while gusty winds also fanned fires in Canterbury. Invercargill dropped from a high of 17C to only 9C by 4pm.

More cold fronts crossed the country over the next four days in a west to southwest flow, with wet, stormy weather continuing. From 3rd to 4th 200mm fell at Angle Knob in the Tararuas. It was unusually cold in the south, with Milford Sound recording a wintry 7C at 4pm on the 3rd. Snow fell on the mountains of both islands, and there was thunder and hail in the west and south of the South Island; parts of Canterbury also receiving thunderstorms during the southwesterly changes of the 4th and 5th.

On the 6th, there were some thunderstorms in the east of the North Island for a time (including some morning hail in the Wairarapa and Wellington), but conditions eased over NZ during the day as the southwest flow weakened and tended milder westerly in the south.

Mean sea level pressure analyses for midday NZST 1st January to midnight 5th January 2006 NZST in 12 hour steps are shown here.

Heavy rain and gales in North Island

23rd-25th January 2006

A deep low of subtropical origin moved south on the 23rd, with heavy rain reaching Northland late in the day. On 24th a low deepened to 990 hPa as it moved from Norfolk Island towards Northland bringing easterly gales and heavy rain. Gusts to 130kph were recorded at Tutukaka and Tiritiri and 150kph at Auckland SkyTower. Power cuts in and around Auckland affected 12,000 people. Rotorua recorded 140 mm and the Pinnacles on Coromandel had 260mm in 14 hours (316mm/24hr). Meanwhile in the South Island, it was hot in some inland areas on 23rd/24th (eg 34C max in Alexandra), as sunny weather continued while the warm air flowed from lower latitudes.

However, on the 25th, a cold front moved onto NZ, bringing a cooler southerly change. The front and change hit the low as it moved over the North Island. Undercutting resulted in heavy rain about Central NZ, including Blenheim/Picton and Wellington (12mm/hr, bringing some flooding in the capital). Muggy 30C maximums were reached in Palmerston North and Masterton before this rainy southerly southerly arrived. Further

north scattered thunderstorms and heavy downpours

plagued the north of North Island (eg Raglan) in the unstable air in the wake of the low.

Mean sea level pressure analyses for midday NZST 23rd January to midday NZST 25th January 2006 in 12 hour steps are shown here.

Heavy rain causes flooding in Bay of Plenty - 10th February 2006

Matata, still with fresh memories of last year's devastating flood, was hit again by major flooding from heavy rains which drenched the Bay of Plenty. On 10 Feb, a surface low west of North Island turned a front over Bay of Plenty into a convergence zone, extending down to Wellington. Flash-flooding closed roads at Matata, Rotoma, Levin and also Lower Hutt. 150 mm fell at Whakatane (100 mm in 11 hr), and there were reports of 250mm near Matata. SH2 was

closed at Matata and at Melling, SH30 was flooded near Rotoma. Heavy rain was also recorded in parts of Central NZ and North Canterbury - SH1 was flooded between Manakau and Levin by heavy rain, and Ashley Forest (North Canterbury) recorded 96mm in 36hours.

Mean sea level pressure analyses for midday NZST and midnight NZST 9th and 10th February 2006 are shown here.

MONTHLY SUMMARY FOR CRISTCHURCH SUMMER 2005-2006

DECEMBER 2005

This month was very different to the exceptionally cold and wet December 2004. Warm northerly or northeasterly flows predominated over NZ, with well above normal temperatures, including Christchurch. However, the city was often cloudy and unusually humid, but any precipitation was mostly in the form of drizzle. There was a change to a disturbed westerly quarter regime from the 20th, with more sunny weather, but it was still changeable at times. There was a period of cool southerlies and showers from the 22nd-24th. Scattered thunderstorms were reported in other (mostly inland) areas of Canterbury on the 5th, 10th, 14th, 21st, and 22nd.

JANUARY 2006

Disturbed westerly quarter flows were often strong over NZ during first two-thirds of the month, resulting in changeable weather as a number of fronts and troughs crossed over. Conditions alternated between warm northwesterlies and colder southwesterly. Conditions were at their most unsettled from the 2nd-6th, with some snow on the Alps, and thunderstorms in parts of Canterbury (but not Christchurch) during the afternoon of the 4th and afternoon/night of 5th/6th. Cool southerlies deliv-

ered a period of persistent rain to the city on the morning of the 12th.

From the 20th, anticyclones became more prominent over the South Island, as the flow tended more northeasterly in Christchurch, becoming increasingly warm and humid by the end of the month. (rather like February 2005)

FEBRUARY 2006

While this month was rather changeable early on and towards the end, there were significant spells of settled weather. Complex troughs on the 3rd and 8th-10th brought some rain and drizzle to the city, while a cool southerly change during the early hours of the 5th delivered some heavy showers, plus thunderstorms in mid and south Canterbury. Cold fronts on the 22nd/23rd brought a change to cold showery southerlies to coastal Canterbury for a time early on the 23rd. Another southerly change during the early hours of the 28th resulted in a low forming off the coast, with a period of heavy showers and southerly gales about Christchurch and Banks Peninsula.

Ben Tichborne

SPRINGFIELD WEATHER OBSERVATIONS

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2006 REPORT

Springfield Weather Observations has now been operating for 9 years at the above address, after 6 years at Westbrook, Rotorua. The station uses official equipment and is positioned as best as possible in the limited amount of open space available. While there have been some small differences in the readings between this location, on the southern fringe of the city, and the official station at Rotorua airport, the Springfield station has proved worthwhile.

The climate at Springfield can be regarded as being fairly typical of most residential sites in Rotorua and the information obtained over the period of operation has proved to be of great assistance for most general purposes.

OBSERVATIONS

Mean air temperature 13.6 deg. C (0.8 above the annual normal 12.8)
Highest air temperature 31.6 deg. C in Febraary (second highest on record, record is 32.9 in January 1999)
Lowest air temperature - 3.5 deg. C August 29 It was a warm winter with May to October all above normal.
Lowest ground temp. - 6.6 deg. C August 29 Total ground frosts 24 approx. (annual normal 57)
Total rain 1632mm (ann. normal 1467) Highest daily rainfall 89.7 mm February 28
Highest monthly rainfall 268mm May (severe flooding in Bay of Plenty) Lowest 18.8mm in April (lowest in 50 years)
Highest wind gusts 40 SW September 23 Mean max. wind gust 17 Knots

Note: Normals have been taken from NIWA data representing the period 1961 to 1990.

There are many weather related web sites to be found on the Internet. I have found MetService's excellent website www.weather.co.nz to be very useful for most general purposes. For Rotorua visit www.geyserlandobservatory.org

This information has been recorded, compiled, printed and supplied with the compliments of Springfield Weather Observations. It may be copied or used as required and referenced where appropriate; however no responsibility can be taken for accuracy of the figures or reports. More detailed information is available on request and may incur a nominal charge.

BRIAN HOLDEN

2006 Met Society Conference Update (abridged)

This year Met Society and Hydrological Society are planning a joint conference to be held at the University of Canterbury, Christchurch on 20-23 November. A third organising committee meeting was held on 17 March and the conference title has been finalised: "Resource Management under Stormy Skies: Water Allocation at the Cross Roads?". The web-site (www.conference.canterbury.ac.nz/rmuss) is in the process of being set up and once up and running will be included as a link on each of the Societies' web pages, and on the Royal Society page.

An additional theme is being added to the conference "Preventing and Mitigating Natural Disasters", in keeping with World Met Day and World Water Day. This is also in keeping with the "Stormy Skies" component of the title, and will give MetSoc participants plenty of options for papers, as well as all of the usual paper topics that will be accepted.

One of three plenaries planned is likely to be something like "Future climate and water resources".

Future Met Society Conferences

2007 Wellington

2008 Queenstown with AMOS

2009 Auckland with NZMMS

2010 Wellington

Climate Change and Governance Conference:

Critical Issues for New Zealand & the Pacific

The conference was one of the most important of its kind ever held in New Zealand. It was organized by Victoria University's Institute of Policy Studies and the School of Earth Sciences and held at the Museum of New Zealand Te Papa Tongarewa on 28 and 29 March

Keynote speaker was distinguished geologist and former chair of Shell UK, Lord Ron Oxburgh <<http://news.bbc.co.uk/1/hi/uk/3815151.stm>> .

The first day of the conference showed the scientific evidence regarding climate change, assessing the risks and its impact on health, water, biodiversity, food and the marine environment in New Zealand and the Pacific. The second day examined policy issues and options.

More than 30 international and domestic Climate Change experts attended, including Dr David Vaughan from the British Antarctic Survey, <<http://www.antarctica.ac.uk/staff-profiles/template.php?user=dgv>>, New Zealander Dr Kevin Trenberth, Head of the Climate Analysis Section of the US National Center for Atmospheric Research <<http://www.cgd.ucar.edu/cas/trenbert.html>>, and Professor Ronald Prinn, Co-Director, Massachusetts Institute of Technology Program on the Science and Policy of Global Change <http://web.mit.edu/globalchange/www/MITJPSPGC_Rpt32.pdf>.

The speech given by British Prime Minister, the Rt Hon Tony Blair, to this conference is still available at <http://www.presentationcentral.co.nz/mediasite/viewer/?peid=ee991d8a-7bf1-4abd-8a05-215719cd8ae7>

The conference website is still alive at <<http://www.vuw.ac.nz/sog/events/info-climate.aspx>>.

Got sent this attached shot of a strange cloud formation near MCMurdo. Would any of your contacts have a suggestion as to what would cause something like this?

Cheers, Vicki Hyde, <vicki@webcentre.co.nz>

The Western Pacific Geophysics Meeting (WPGM) provides an opportunity for AGU members, and members of the sponsoring societies in the Western Pacific region, to attend a meeting that serves the needs of geophysicists interested in studies in the western Pacific region. However, papers on all related aspects of geophysical sciences are encouraged. This is the first WPGM to be held in Beijing.

For more information check out the website

<http://www.agu.org/meetings/wp06/>

J.L.M. Waygood. 1917-2006

Jim Waygood, a member of the Society since it formed in 1979 and a retired Meteorological Service senior forecaster, died in Auckland on March 3rd at the age of 88.

Jim was appointed to the Service in 1941 and after initial training spent some time in the Pacific on forecasting duties for the NZ Air Force, of which the Meteorological Service was a department at that time. He saw service in Espiritu Santa (New Hebrides now Vanuatu) and at Guadalcanal (Solomon Islands) returning to Auckland in 1943 after contracting malaria, spending the remainder of his career there.

Jim remained devoted to aviation forecasting and remained on 24 hour shift work until his retirement in 1977 at the age of 60. At this time all the international aviation forecasting was done in Auckland, initially for flying boats plying the Tasman between Mechanics Bay or Evans Bay and Rose Bay (Sydney). Later this service extended to other Pacific destinations. Then came the land-based flights with Constellations and Boeing Stratocruisers etc. which preceded the turbo-jets and then the pure jets, each class flying at successively greater altitudes needing a steady development in forecasting techniques, meteorological knowledge and technology. Included in this development was relocation of the Auckland office to Graham St. in 1962. Running parallel to these services were those to domestic aviation and regional general and shipping forecasts

Throughout his career Jim ("Lucky Jim") was held in high esteem by his colleagues, not only for his forecasting skill and knowledge but also for his integrity, unfailing good humour and contribution to office morale.

Following his retirement, Jim became a pilot himself flying small aircraft from Ardmore. He also undertook a 2-year tour of duty as OIC at the Nadi Meteorological Office when this remained under the control of the N.Z. Meteorological Service. Other post-retirement activities included volunteer work with the NZ Blood Service, bowls, skippering a Hauraki Gulf tour boat, holidaying at the family bach at Piha, being involved for 20-years with the Auckland Car Club, being a team member of the New Zealand Challenge in Perth for the America's Cup in 1986/7 and attending Auckland Philharmonia and NZSO concerts with whom he was a long-term subscriber.

Jim is survived by his wife, Joan, their three children, 7 grandchildren and 3 great-grandchildren.

Notes on Jim Waygood - Compiled by Jim Hessel after talking to Laurie Larsen and Joan Waygood.

FRANK DROST'S Thesis

On 27th January, Frank Drost, our recent secretary, successfully defended his PhD thesis, and obtained his doctorate in the geophysics. An abstract of his thesis is presented below and the full version of the thesis can be found at <http://metvw.com/thesis/drost2006.pdf>

New Zealand's climate during the Last Glacial Maximum has been investigated using the UKMO global and regional models HadAM3H (GCM) and HadRM3H (RCM). SSTs and sea-ice were supplied from a set of prior coupled model (HadCM3) runs and all models were set up according to the glacial conditions as specified by PMIP.

In the analysis of the global simulation, emphasis was placed on the climate of the Southern Hemisphere. Compared to the present day, the modelled climate of the LGM is mainly characterized by the different wind regimes, both in the zonal and meridional directions. In the zonal mean, the polar trough shifted equatorward, and the westerly wind increased slightly between approximately 30°S-50°S, and decreased poleward of this zonal band. At the same time, there was an increase in the number of and/or strength of southerlies between 35°S-60°S. This resulted in a reduction of the poleward zonal mean meridional heat transport, and an enhancement of the wave number 3 pattern in the mean zonal circulation. All these changes contributed to a weaker SAO during the LGM. Interannual variability was as today, dominated by the High Latitude Mode (HLM, or Antarctic Oscillation/Southern Annular Mode) and ENSO. For the LGM, New Zealand was about 2.5°C-4°C cooler than in a pre-industrial control simulation. The seasonal cooling was largest during winter. Excluding the Alpine region, the largest cooling geographically took place in the east of the South Island. Precipitation was in general reduced everywhere during the whole year, except for the east of the South Island. The westerly wind increased considerably over the North Island and the northern part of the South Island, but was weaker over the rest of the South Island. JJA was the exception with weaker westerly winds over all New Zealand, which was probably related to enhanced blocking during that season. The stronger westerly wind accentuated the cooling over the North Island, except for the eastern region, where it mainly enhanced the dry conditions by preventing the moist easterly winds coming ashore. The weaker westerly wind in the south on the other hand encouraged enhanced penetration of moist winds. The most dramatic change in the modelled New Zealand climate was the large increase in the number of southerlies in each region, which were capable of bringing very cold polar air over most of the country. It was probably mainly the changes in the winds that lead to the harshness of New Zealand's climate during the LGM, increasing the seasonality in temperature and precipitation. It is suggested that they had therefore a controlling influence on the existence of some of the vegetation types in New Zealand.

Graphics have been lost Her is what the illustrated:

Answer to last newsletter's puzzle.

Media clips

The Press 22 Nov 2004

Ashburton Guardian 4 Dec 2004

Capital Times 8 Dec 2004

Horowhenua Kapiti Chronicle

All photos on this page from TIMARU HERALD 18 Dec 2004

Nelson Marlborough Farming 30 Nov 2005

Countrywide Northern Nov 2005

Opotiki news 1dec2005

Howick Pakuranga Times 6 Dec 2005

Herald 31 dec 2005

Herald 1 Dec 2005

Marlborough Express 21 Dec 2005

Otago Daily Times

Wakatane Beacon13 Jan 2006

Press 11 Jan 2006

Greymouth Evening Star 30 Jan 2006

Whakatane Beacon 11 Jan 2006

Press 26 Jan 2006

Dominion Post 3 Jan 2006

Press 3 Jan 2006

Waikato Times 3 dec 2005

Waikato Times 3 Dec 2005

Waikato Times 3 Dec 2005

Otago Daily Times 12 Jan 2006

Herald 7 Feb 2006

New Zealand Herald

Gulf News 8 Feb 2006 , Taranaki Daily News 9 Feb 2006

Daily News 9 Feb 2006, Ashburton Guardian 10 Feb 2006

Herald 28 feb 2006, Wanganui Chronicle 1 Feb 2006

Herald on Sunday 12 feb 2006, Herald on Sunday 12 Feb 2006

Sunday Star Times 12 Feb 2006 ,Coastal News 19 Jan 2006

The Press 3 Jan 2006 , Otago Daily Times 7 Jan 2006

Press 20 Jan 2006