

THE CHENRY CHRONICLE

By Christopher and Heather Henry

On May 25, 2005, US District Judge G. Thomas VanBebber died unexpectedly at his home in Overland Park. Great uncle and role model for his nieces and nephews, Chris remembers Tom's enthusiasm for traveling, and recalls speeding along on I-70 on a trip to the cabin in Colorado. Chris remembers Tom sharing his experiences to historical civil war places of interest. His desire and enthusiasm for places not near to us, is a lesson to us all. We dedicate this issue to him. He will be dearly missed.



Australia from Space, Tasmania is the island below the continent of Australia. The clouds are about to cover it up.

JetStar

On the evening of May 2 we left for Hobart, Tasmania on Jetstar airlines. Jetstar is a “no-frills” budget airline owned by Qantas. No drinks, no peanuts, no snacks just a nice safe comfortable ride. A bright orange star is part of their logo. The airline reminded us of Southwest Airlines as we didn't have seat assignments either. Their jingle is “Come Fly JetStar!”



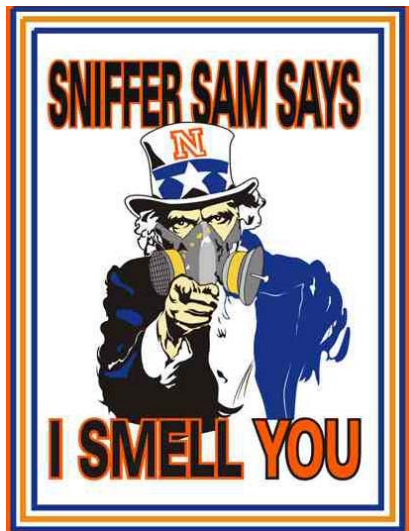
CASANZ conference

Chris attended the Clean Air Society of Australia and New Zealand (CASANZ) where he presented twice, once for the odour workshop and again later for a joint session between the odour and modeling workshops. The rest of the conference involved technical sessions and a lot of tea, the Aussies have an hour-long morning and afternoon tea break every day (at conferences) which allowed for a lot of discussion in the hallways about topics of the day. A tremendous amount of controversy exists among the experts about whether the standard instrument to measure emissions should be the flux chamber (isolation hood) or the wind tunnel. A heated debate which has lasted for about 10 years. All went well and I received many thanks for presenting on work we have been doing in the US. I provided a perspective for another approach to the same problem, how people and livestock can co-exist in the rural landscape.

Interestingly I followed an American modeling expert, the keynote speaker, an expert in the US on modeling, who I essentially contradicted later in my presentation (he was not aware of work we had been doing with odors and with particular models). It reinforced to me the lack of communication of research and efforts in the

US and around the world and the purpose of Fulbright. I have learned to be humble in my talks to Australian odor experts, and they have told me that they sincerely appreciate this, it's a kind of vindication to them I think, recognition that there are other experts in the world besides Americans.

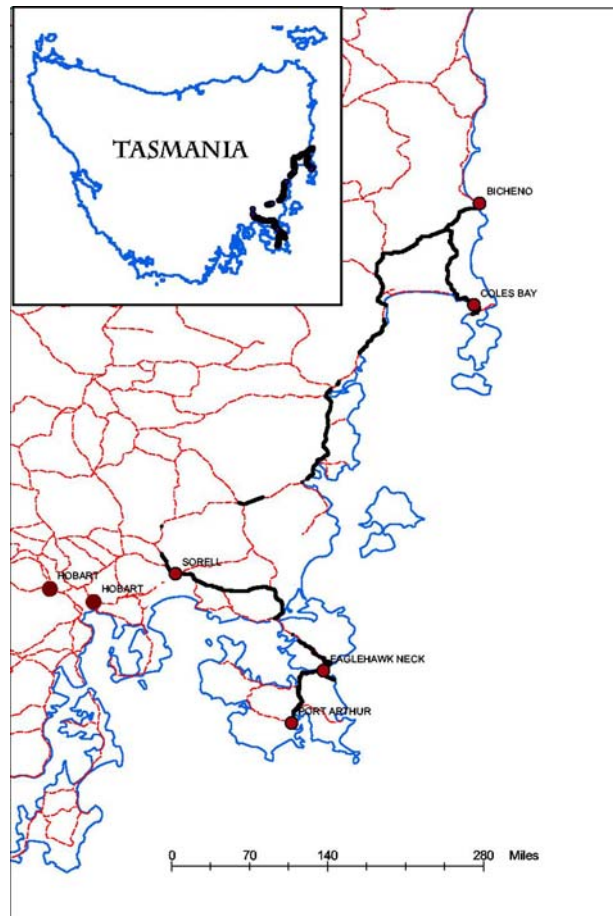
I created quite a stir during my presentation when I showed them "Sniffer Sam" my recruitment poster for sniffers.



The Sniffer Sam print on the bright colored t-shirts that the sniffers wear while sniffing. Chris can always spot his sniffers in the field.



Our campervan (motor home) we rented to travel Tasmania. The only Mercedes Chris will ever drive.



The path we took on the east side of Tasmania.

Cadbury Factory

This factory was built in Tasmania in 1922 from a Quaker family, George Cadbury. He is the son of John Cadbury who started this empire in England. The Cadbury Family was friends with the Hershey Family (also a Quaker family) and they agreed never to compete (a gentlemen's agreement that is still in force today). Hence, we don't have Cadbury chocolate bars in the USA and why we can't find Hershey bars here.

We took a 40 minute tour of the Cadbury Factory. When we say Cadbury you probably think of those Cadbury easter eggs that have the creamy center. Well, those are not made in Tasmania and the Australians haven't the faintest idea what you are talking about since they don't have them here.



Cadbury Factory in Tasmania.

Since this is a food processing center we were not allowed to have any jewelry or handbags. We wore netted hats. No cameras or video cameras were allowed either. They loaded us up on chocolate samples at the beginning of the tours, the equivalent of two regular size snicker bars which pretty much quashes your desire to pick chocolate off of the conveyors. We sampled many varieties. There are 400,000 bars of chocolate that come out of the plant each day. We saw the new huge mixing machines that mix chocolate in about 6-8 hours. They still use the old mixing machines that take about 18 hours to mix the chocolate. The vats of chocolate are stored at 42 degree Celsius while waiting to be poured into molds. Australians are huge chocolate eaters. At the end of the tour they have a shop you can purchase "the seconds" at a reduced price. A pretty good bargain to buy three blocks, about 750 mg (1.7 lbs) for \$4.00 USD. Normally at the grocery store one block of 250 mg is \$2.00 USD.

Mount Wellington

We drove up to Mount Wellington, a mountain just outside the city of Hobart and is a favorite look-out. It took us about an hour to drive up the mountain. It was so windy and cold up at the top we could not stay warm. We needed more than gloves and hats. We would run to get out of the wind. You could hardly hold your camera steady as the wind about blew you over. The heater in the car could not heat up fast enough.



From the top of Mount Wellington, the city of Hobart below.



Heather tries to warm up in the shelter by the imaginary fire.

Cascade Brewery

We were too late to take a tour of the brewery so we bought a sample card and tasted some beers. It was pretty good. Cascade is the oldest brewery in Australia. Most beers in Australia are 5.0% alcohol. We really liked the sweet cider beers they make here. The logo is the Tasmanian Tiger which has been extinct since 1936.



The old brewery still in use today.



The Tasmanian Tiger

Port Arthur Historic Site

We rented a campervan, or motor home to site see Tasmania. It was an experience in itself. We had a shower and a toilet. Chris wanted to make sure there were toilet facilities since Heather has to use the restroom often.



Port Arthur Site from the ferry.

The first stop was to Port Arthur, a penal settlement established in 1833 and closed in 1877. The water provided the gates for the prison. There were 200 buildings on the site originally, but after the prison closed many of these buildings were taken down. People would purchase bricks as souvenirs. Now only about 100 buildings remain, only a fraction of what was once here.

By 1840 over 2000 convicts, soldiers and staff lived on the settlement. It was tough to be a prisoner. They were fed very little. For breakfast a slice of bread, a spoon of sugar and oatmeal. I don't know how they survived on such little for doing so much heavy labor during the day. As a convict they would put you in chains that were linked to other convicts, called chain gangs. These chains were very heavy with up to 65 lb on each leg. The youngest prisoner was 10 years old.



What is left of the building, structural support to keep the walls from collapsing.

Some tried to escape, and if caught you were beaten to within a inch of your life with a wet lashing whip (saltwater), and after you were bleeding and nearly unconscious, they had you go for a swim in the ocean, which was usually just above freezing. One convict they decided to make an example of so they cut off his arm as an example to the others. No anesthetic, no clean gauze, just a blade and some fire.



The church behind Heather used to have a wooden roof but caught on fire and was never replaced. A convict lost his life mysteriously one day when he just fell off, an accident or was he pushed? A mark down the wall where he fell still remains.



Chris trying on the chain gang leg irons.

When soldiers or prisoners died they were buried on the “isle of the dead.” There are about 1100 people buried on this island about the size of an acre. The lower part of the isle was reserved for convicts and tombstones or other markers were not allowed until 1850. The high ground was reserved for civil and military burials. But just think, in the end they all are buried on the isolated island together so what separates them?



Most of the tombstones have deteriorated since the sandstone they were made of was not durable.

We went on the 9:00 nightly Ghost Tour which was very interesting to get a different perspective of the historic site. We bought beanies and gloves to keep warm. The floors were sanded and varnished in one of the houses in the 90’s. After they were finished, the workers came back the next day to find a footprint next to the fireplace that wasn’t there the day before. It is a mystery of where it came from since there is only one and not two and it was in the middle of the room and what seemed would be a difficult challenging placing a footprint in recently applied varnish from windows at least 10 feet away.



Full view of the room, the footprint is on the right side of the fireplace.



The mysterious footprint located near the fireplace.

Bicheno Diving

We drove up to Bicheno to go scuba diving and see the penguins. We did two beach dives wearing 7mm suits and hoods to keep warm. The water is much colder than we are used to. The temperature was 17 degrees Celsius (62.6 degrees Fahrenheit). We saw a purple sea

dragon which was very pretty. We also saw a globe fish and other temperate water fish. The sea is different here than in the tropics, it is all kelp. Diving in this cold water is considered temperate water diving, and few recreational divers attempt it. Most divers that dive Tasmania are professional divers or come from England or similar climates where the water is cold.



Our first time to dive with 7mm suits and hoods, it looks uncomfortable but keeps you warm in temperate water.



The Bicheno beach dive location at sunset.

Fairy Penguins

We went on a Penguin guided tour which lasted an hour. The penguins are only about 12 inches tall. They swim out to sea early in the morning starting about 4:30am. They stay out at sea all day until dusk, walking back to their same burrows each day. The penguins sleep 20-30 seconds at a time during the day. At night they sleep a maximum of four minutes at a time. These animals get as much sleep combined as any other animal. They mate once a year with the same partner. The male beak is longer than the female which is the only way you can tell the penguin genders apart. When mating each night they are very loud drumming sounds.

The company that runs the tours has helped increase the population of these penguins by building burrows. The humans by going on the tours keep the predators away. No photography flashes are allowed since they blind the penguins. Their eyelid reflexes are not the same as ours.



The Fairy penguins coming ashore at dusk.

Freycinet National Park

Our last stop was to Wineglass Bay and Coles Bay located in the Freycinet National Park. We hiked an 11km circuit around hazards beach to the wineglass bay beach and up to wineglass bay lookout. It took us about 5 hours to complete while the ranger misled us thinking it was a 4 hour hike. Chris wouldn't have come if he had known that before hand. The views were so beautiful it was worth it. We packed our lunch, peanut butter and strawberry jam and ate on top a big rock. Grape jelly isn't available in Australia.

Dinner that night was well deserved after the long tiring hike. We booked reservations at the Edge of the Bay Resort, which had a very contemporary style. We had seafood which was very good.



Coles Bay



Chris and Heather at the top of Wineglass Bay lookout.

The next day we hiked around the light house lookout since it was only a 20 minute walk around.



The view from the light house looking east to the Pacific Ocean.

The roads in Tasmania are very windy and narrow. We couldn't tell how long it was

going to take to get to the next town by the number of kilometers so we didn't get as far as we thought.



Sign we frequently saw on the road...watch out for kangaroos.

Back in Queensland.....

Ginger Factory

The ginger factory is located at Yandain Queensland on the Sunshine Coast. The sunshine coast is located North of Brisbane. It is the largest factory in the world. They manufacture 400 hectares of ginger. The largest amount from one producer is 100 acres (35 hectares). The longer ginger is in the ground the more flavor it gives. They use the ginger to make the ground ginger like you buy in the store. Most of the ginger is manufactured early in the season which is pulled out of the ground by machine and then sorted at the factory. A robot sorts the different sizes of ginger. Then the ginger is cooked in vats for 13 days to make a syrup.



The Bungim Ginger Factory



The ginger being sorted by size.



The vats of Ginger turning into syrup.

Ocean Cat

We went out on a boat called the Ocean Cat at 8 am. We did 2 dives off the boat near Moreton Island. The first dive was a deep dive called Gotham City. It ranged from 22 to 36 meters. Heather lost her weight belt so luckily a friend, Bruce, went down and retrieved it for her. Luckily for him he found a torch while retrieving the belt. Heather got down to 20 bar and almost ran out of air. She had to use air from her Instructor. It was a beautiful day but cool on the boat when moving since it is winter here. A little early for the whale season but, three hump back whales greeted us while we were there. The whales are huge.

The second dive was at Owen Stanley Rogers. It is a series of reefs and valleys with a huge amount of reef fish and coral.

One of the perks on the Ocean cat is that the crew brings you your gear and tank and help you put it on at the edge of the boat. It is easy to just jump into the water.



Typical Whale sizes:

**15 metres long (3 m longer than a Greyhound bus)

**45 tonnes (4½ times as heavy as a Greyhound bus)

**with long pectoral flippers that are about one-third of its body length.

During June and July around 5,000 humpbacks pass by the Brisbane area as they migrate northward from their summer Antarctic feeding areas to their tropical winter breeding areas along the Great Barrier Reef.

Feedlot Survey

Chris joined his feedlot consulting group for a day to help survey a feedlot and get a tour of a new feedlot under construction. Interestingly this feedlot is expanding in order to accommodate an ethanol plant, a very rare occurrence here. In fact we have yet to see ethanol fuel here, its just not available, but this is changing. Lots of talk and planning in the news about building capacity. This producer was trying to make use of the new by-products generated from the ethanol plant.

I was able to observe the feedlot pad construction process during the day as I helped with a survey of the existing feedlot.



Mate surveying feedlot fence lines. Great care is taken in the design of feedlot drains, which move lot runoff to the sediment basins. Side and cross slopes, top and bottom widths and vegetation are all specified in the application (permit). Typical drain seen on an aussie feedlot.



Construction of the feedlot pad: The contractor is applying water using a water tank and a blade to incorporate moisture into the soil for compaction later. It is extremely dry and difficult to properly construct pads this winter.

I have noticed that land base is just not a big issue here for new applications (permits). Seems that the price of nitrogen fertilizer is very high here, and generally is imported. Anhydrous ammonia and most other forms of nitrogen cost approximately, \$0.45/lb USD (converting from metric tonnes to pounds and assuming the current exchange rate of about 0.75AUD/USD). Contrast this to about \$0.15/lb N which is what most producers in the US pay. As a result organic manures, are a valued commodity to non-livestock aussie farmers. Most feedlots and other livestock

operators have no or little difficulty in transferring or selling manure to neighboring crop farms. Also recognized is the value manure has on the water holding capacity of the soil, something that farmers here have taken note of in the extreme drought that Australia is facing. The drought is so extreme here that reservoirs are down below 5 % marks, most small farm ponds are dry, some communities are on the brink of running out of water (literally no water from the tap).

In some communities, they have not mowed lawns in 2 years, and are only allowed 2 minute showers. If conditions continue it is possible that Sydney could run out of water this year. Many farmers have 0 yield for crops and the landscapes remind me of the drought conditions experienced by western NE and KS producers during the last few years.

Chris's Technical Update

Currently I am trying to finish up my feedlot emissions work, which should be completed by the end of this month if all goes well. The group I am working made a slight "adjustment" to the emissions model, so I have had to go back and rerun all of my dispersion modeling work. The end goal of the project is to develop odor criteria for the feedlot industry in New South Wales, but the implications of the process are much more widespread. I am working on a paper for this as well as helping with the final report.

I am also working with 2 regulators in two different states on a paper that compares the "simple tools" in the US (OFFSET and OFT) with the separation distance guidelines all of which are based on dispersion models. I am finding many similarities and interesting differences between the methods. Except for one, all were developed using dispersion models in some fashion. The paper should provide some new ideas and perspective to the tool we are developing for Nebraska.

I am hopeful that I will finish my regulatory comparison soon also as I am waiting on a co-author for his input. I continue work on two

papers for my research in NE, and am still finding time to communicate with colleagues in the US.

Recently an article was written about me in the Australian Fulbright Alumni Newsletter. It is entitled "Dung Down Under." To read this article see the following link. I think you will also find it interesting to see what the Australian Fulbright scholars are doing in the US:

http://www.fulbright.com.au/download/FulB_Mar2005.pdf

Australian vocabulary

Ankle biters = *kids*

Avos = *avocados*

Beanie = *stocking hat*

Bloke = *guy*

Fringes = *hair bangs*

Greenie = *environmentalist*

Hoist = *line to hang up laundry*

Lollies = *candy or sweets*

Muster = *round up sheep or cattle*

She'll be right = *it will be alright*

Shire = *county*

Stuffed = *messed up*

Uni = *university*