Cyclone Tracy Viewed from the Eye
(of a Darwin Duty Meteorologist with the Bureau of Meteorology)

by Lloyd Stümer

"***Before*** Christmas Eve of 74, before warnings sounded out
On all the broadcast stations that a great storm was nearabout"
the meteorological observations (satellite, radar and surface measurements) were indicating there was a strong possibility that a developing tropical low or depression could cause serious damage to Darwin, and to the new house (nearing completion) and contents recently acquired by my wife Debbi and myself. I and a colleague from the Bureau of Meteorology urgently took a few minutes off work and increased our contents insurances by several thousands of dollars. The friendly insurance clerk assured us that our contents would be immediately covered for storm and tempest and cyclones. He added that "One of our biggest businesses is from people who are probably overanxious about cyclones". He never knew where we worked. An hour later the first warnings were issued that a newly formed Tropical Cyclone Selma posed a threat to Darwin.

This was one of the few perks of the job of being in the Bureau of Met. Well it compensated somewhat for the friendly jibes of "Don't believe a word he says because he's a weather forecaster". You would understand that everyone from the Bureau has this credibility problem. The Bureau teams are trained to observe, collate information, assess, discuss, forecast and communicate changing meteorological conditions to aviation, shipping, the military, industry, media and the public plus when necessary issue warnings of various dangers in specified geographical regions of responsibility.

Tropical Cyclone Selma with destructive winds passed within about 50 km of Darwin a couple of weeks before Christmas 1974. A very near miss indeed. This was fortunately very different to the devastation wrought upon Darwin by previous tropical cyclones in 1897 and 1937.

On 20th of December 1974 satellite photos of a large mass of cloud revealed the existence of a new tropical depression in the Arafura Sea, nearly 400 km to the northeast of Darwin. Thanks to Cyclone Selma, our contents insurance was now adequate. Our home builder had been selected because he was one of the few builders (the only one that I can recollect) who had offered cyclone rods (to tie the roof down to the floor joists and the floor bearers to the posts). The elevated home was near completion and should have been ready for occupation by Christmas. The only thing left to do was to ensure there were adequate stocks of barramundi and freshwater crayfish in the new freezer (a job happily completed in the Top End creeks, rivers and billabongs with Bureau of Met mates and fishermen Vin Shuey and Jordi Maas). 1974 was going to be a good year, topped of course by my Easter marriage to Debbi (nee Sadgrove) by the Reverend Doug McKenzie in Darwin's Uniting Church. Debbi's parents and sisters Fiona and Megan were living in Rothdale Road in Darwin and my brother Glen had also just arrived to start work with Telecom. 1974 and Darwin were looking fine indeed for many people. Meanwhile this tropical depression was developing to form Severe Tropical Cyclone Tracy.

Then

"On Christmas Eve of 74, the warnings sounded out
On all the broadcast stations, a great storm was nearabout"
as in the words of the famous song ***Santa Never Made It Into Darwin*** by Bill Cate and Boyd Robertson. Tracy was heading straight for Darwin. The Bureau of Met operational team (including observers, communicators, technicians and forecasters) were at battle stations, even on Christmas Eve. Everyone had clearly identified tasks, training and responsibilities - the only player that didn't always abide with the written rules was meteorology itself.

Well, we had not yet moved into the new house as several hours of minor painting needed to be finished. So a quick trip was undertaken to personally tighten up all the cyclone rods and check that the builder had removed all rubbish. Then a few hours were needed to finish the Christmas shopping. The warnings on Cyclone Tracy were being continually discussed between the friendly shoppers. One woman falsely believed that Darwin was safe and that the Tiwi Islands would always protect Darwin. Another lady stated she hoped the cyclone would hit Darwin because it was a long time since she had experienced a cyclone - she had previously experienced slightly windy and wet weather on the fringes of a cyclone and mistakenly believed that was all a cyclone was about. General optimism and high spirits abounded everywhere on Christmas Eve.

The recent Tropical Cyclone Selma was not a good role model to educate the general Darwin public of the real dangers of tropical cyclones.

A personal late afternoon check at the Regional Forecasting Office of the Bureau reinforced my belief of the potential seriousness of the situation. I reported several hours early for my rostered midnight to dawn (doggo) shift on Christmas morning because I knew the weather just before midnight would make driving dangerous. In a decision that probably saved their lives, Debbi and Glen wisely resolved to stay the night with Debbi's parents and sisters in their robust-looking brick house rather than stay the night in our flimsy fibro Commonwealth elevated house in Trower Road.

And what a night was had with Tracy.

Jordi (technical assistant) and Vin (observer and radar operator) were also due to do the doggo shifts. No fishing would be done this night.

Jordi on his way to work stopped for about 10 minutes in blinding rain at the flashing lights of the railway crossing then on the Stuart Highway waiting for the train to cross. Then he thought that perhaps the lights were malfunctioning and with great trepidation he quickly but blindly drove across that crossing. Fortunately there was no train.

Vin drove to the lonely meteorological radar at the airport and parked his car on the downwind side of the building to protect it from expected flying debris. Vin was the real unsung hero of that night. He provided the frequent radar images (via photo and facsimile) which were essential to the forecasting staff for assessing the latest location plus direction and speed of movement of the cyclone. When the eye was over the radar hut, Vin quickly ran outside and parked his car on the other side of the building to avoid the change in direction of flying debris. And Vin's girlfriend Lola Hine (later to be Vin's wife) was soon to be busily occupied as a nursing sister at the Darwin General Hospital tending to the seriously wounded. There would be many unsung heroes of the night and following days. There would also be isolated negative incidences best forgotten.

Fellow forecaster Graeme Crooks stated grimly that he never really wanted to forecast high seas on the Darwin Harbour where the seas were normally quite smooth. That night on the rotating shift roster, Graeme was to write the public and marine forecasts, I was to write the aviation forecasts and Din Siregar was to draw the weather charts routinely transmitted from Darwin to the world. Judy Kroll was handling communications. Several technicians (including Jordi) and observers were responsible for the collation and presentation of all the observations from various sources. And of course none of the complex equipment would have worked at all without the maintenance and repairs by the electronics technicians. Responsibility for the writing of the actual cyclone warnings belonged to the two most senior meteorologists Ray Wilkie (Regional Director) and Geoff Crane.

The Eighth floor of the MLC building in Smith Street (on which the Regional Forecasting Office was located) began to shake, rattle and almost roll as the howling wind steadily increased. This was particularly so after 1.00 am when wind gusts started to exceed 130 kph. The Bureau emergency diesel generator had cut in to help maintain our operations. Our lights were blazing brightly inside the office, while outside Darwin was blacked out but eerily illuminated by constant lightning flashes in the driving rain. The precast concrete walls started to flex inwards and outwards by a couple of inches with respect to the floor. Staff began to position themselves and their work behind internal concrete pillars for safety, as some windows broke and in case the walls collapsed. At various stages of the night we all lost local telephone communications with our loved ones in Darwin as their homes were being destroyed, but ironically maintained contact with the outside world. Reliable and dedicated communications are extremely important to the Bureau's operations.

At 2.30 am the last warning was issued by the Darwin Office stating that "Tropical Cyclone Tracy at 2.00 am was 18 km westnorthwest of Darwin moving eastsoutheast at 6 kph. The eye of the storm is expected to move over Darwin soon. Winds should become lighter to calm for a period up to 1.5 hours before rapidly increasing to its previous intensity from the opposite direction." Very few of the local Darwin population were then in any position to receive or respond to this latest warning, but other recipients outside of Darwin were.

It appeared probable there would soon be loss of communications and therefore functionality from the Darwin Office. As meteorological services (particularly to aviation, shipping and emergency services) needed to be maintained, responsibilities for forecasts and warnings throughout the Darwin region were then formally passed over to the Perth Regional Forecasting Office of the Bureau until further notice. The other alternative was that Brisbane would assume those forecasting and warning responsibilities. Darwin, Perth and Brisbane were the only offices equipped and skilled to handle tropical cyclones.

We then all bunkered down to survive the night. I quietly questioned the merits of Ray's suggestion that our chances of survival would be greater by remaining on the Eighth floor (where we had electricity, communications and facilities) and riding the building down to the ground if it started to crumble. I had suggested I thought that we would be safer if we all went to the basement or lower floor with the available torches. Fortunately neither of us had to prove our survival ideas. The building structurally remained intact. Perhaps Ray just had more faith in the structural integrity of the building. I do understand his desire and responsibility as Regional Director for him and the Bureau office to be contactable by interstate personnel for as long as possible. We all stayed on the Eighth floor.

The wind anemometer had been broken at 3.00 am and there was now no real record of the wind strengths. From within the office, one could subsequently only estimate any variations in relative wind speeds by its loudness, frequency (i.e. high pitched whistling or screaming) of sound and the degree of shaking or vibration of the building.

We very anxiously watched the steepening fall of the barometer readings as the cyclone eye approached. The scale on the recording chart paper of the barometer was between 950 and 1040 hpa. But at about 4.30 am everyone in the Office stared quietly in disbelief as the pen trace indicating the station level atmospheric pressure dropped below 950 hpa and continued to drop to the bottom edge of the chart. The orchestra of Tracy was by now playing a deafening and frightening deadly crescendo as the wind shrieked and howled and the building shook and bucked in response. Then the pressure (shown by the chart recording ink trace) started to rise and a spontaneous cheer went up from the huddled workers. The winds changed from the north-east to the south but maintained their rage as the eye passed just to the north of the office. We were remaining in the eyewall with the strongest winds.

The building now shook more and the wind noise increased in volume and pitch suggesting that the winds had become even stronger after the passing of the eye. There may still be some controversy over whether the winds were stronger after the eye. Probably most Darwin residents believe the winds were stronger after the eye due to their personal experiences and the fact that most damage to Darwin was done after the passing of the eye. I personally believe from the night's experience that the winds may have been stronger after the eye. However a Melbourne-based Bureau of Met investigator into the cyclone suggested my perception may be wrong because of different "sail area" and exposure of the MLC building after the eye had passed to the north, and that it could be natural to expect more damage after the eye due to the weakened state of the buildings and the presence of more damaging debris. I suggested that consideration should also be given to the issues that (at that time) no work had been done on the "exposure of the MLC building" to different wind directions, and that after the eye only the strongest structures would be remaining, and that the local population (already conditioned to the horrific winds) should not have commonly thought the winds were greater after the eye. Being no longer with the Bureau of Meteorology I am not constrained by any official Bureau position, if there is one. But the issue of wind strength before and after the eye of Tracy is now of academic interest only. As a previous forecaster, I can still put a "bob each way" but favour "winds were stronger after the eye".

The Aftermath

Between 5.30 and 6.30 am, despite the now faltering and intermittent state of telephone communications from the office, I managed to ring my mother in Kingaroy (Queensland). I told her Darwin was seriously damaged by Tropical Cyclone Tracy but said not to worry and I would contact her again if anyone in the family was harmed. She wished us Merry Christmas. She was about to drive out to spend Christmas Day with my sister and her family. There were certainly official and unofficial communications by Bureau of Meteorology staff (and possibly others) to the outside world during the early morning. This is contrary to all published material that I have seen suggesting that there were no details of damage until improvised communications were established later in the morning by various groups of people.

We unlocked the ground floor doors to the MLC building and let in a very frightened group of people whom we discovered cowering outside the building for shelter. At this stage it was very obvious that security of residents from the elements was of much higher priority than mere security of materials and information on the various floors of the building. *Meteorologist Bill Manchur was in a Katherine hotel a week or so later when by coincidence he spotted a young man displaying the Bureau of Meteorology barometric chart recording "souvenired" from the Darwin Office while taking advantage of the shelter offered - Bill politely retrieved the irreplaceable chart.*

When the winds had abated to a level where we thought there would be no danger from flying debris, I drove homewards with Jordi in my ute. We weaved as we dodged between and drove over the mangled and twisted remnants of houses and infrastructure scattered randomly over the roads as well as the allotments. Very strangely there was no one to be seen. Only rubble seemed to exist. It was like driving into a city that had just been flattened by an atomic bomb. Our trembling thoughts and conversation during this slow bumpy trip to the northern suburbs were "Oh God, everyone nearby is either lying immobilised under all the wreckage or has been killed."

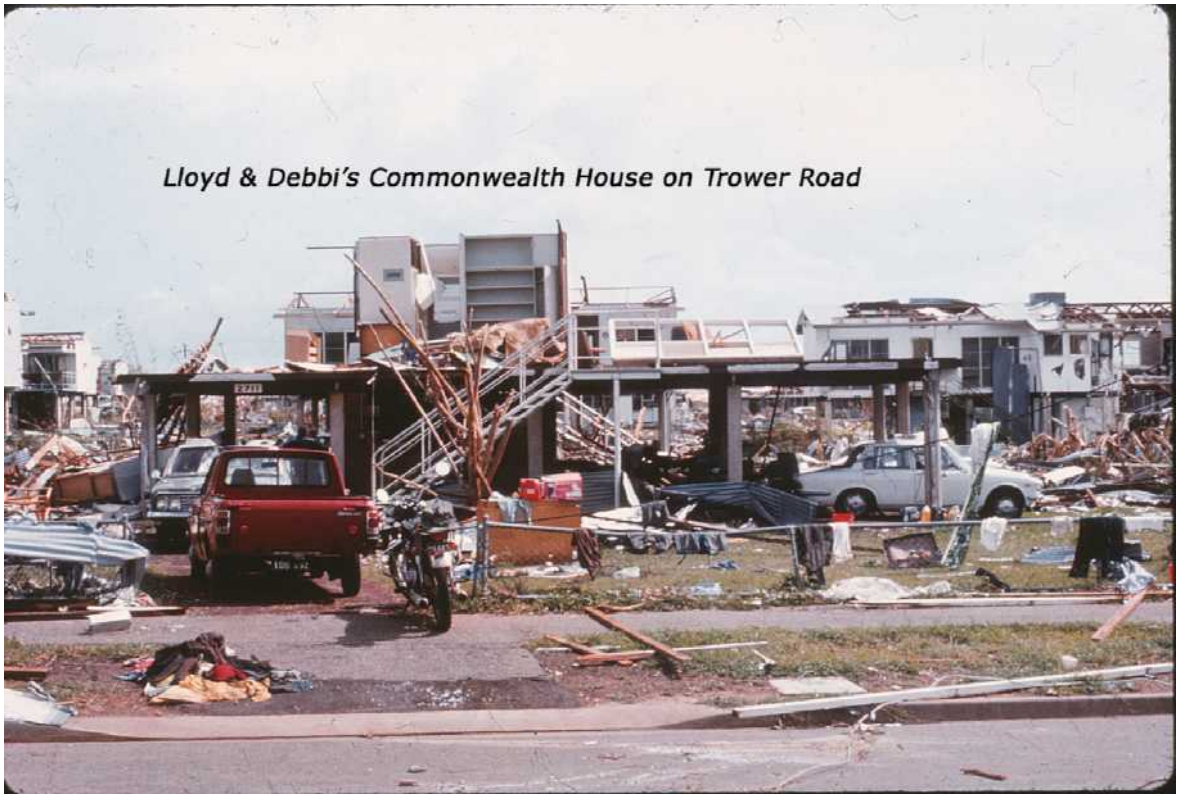
We managed to eventually reach Rothdale Road and then with a cold shiver saw in the distance that Debbi's parents' house had been flattened like most of the rest. But when we got to the house there was no one there either. We sprinted to the Casuarina High School which was the nearest and most substantial public building. There we had our first contact with fellow residents since leaving the office. But still there were no signs of Debbi, her family or Glen. Frantically we sprinted back to the Rothdale ruins and were just beginning to drive elsewhere when we were spotted by Debbi. She had just emerged from a less damaged house across the road (where she had been sheltering with her family and Glen after it was safe for them to crawl from the rubble of her parents' home). They spent a horrifying night sheltering under a bed and a table as the house was being completely destroyed around them. They survived with minor cuts and bruising from the blasting by the wind and debris.

Our own new house had disappeared apart from the leaning posts, the bearers and the stairs. Even all the floorboards were missing as the floor joists had not been fastened strongly enough to the floor bearers to cope with the extreme winds. As the roof went, so did the attached joists and floor. Tragically the builder's daughter was killed in a similar nearby house. *One of the luckiest fellows in Darwin that night was a neighbour of our new house who on Christmas Day described the wild fury of the previous night. He said the cyclone suddenly stopped so he got in his car and drove for 20 minutes to see how a mate had fared. He had just got to his mate's place when suddenly "that bloody thing came back and hit again with full force". At that stage he had no idea that he had just driven across town keeping pace with the shrinking eye of the cyclone after it had made landfall.* The Commonwealth house we occupied was also destroyed, with all rooms demolished except the toilet.

The next few days were spent collecting rainwater funnelled into buckets from sheets of iron, eating our tinned food which had been stockpiled for the wet, scrounging through the yard under the remnants of our houses for personal belongings, and deciding our options for the future. We were overjoyed to be alive. Darwin still remained a desirable location, despite the devastation. Fiona later met and married a young Pommie carpenter Steve Parkin, who had come to help rebuild Darwin. Megan later married a young pharmacist Paul Cracknell, while they both worked for the Northern Territory Health Service.

Debbi and I returned to Darwin in October 2004 (after leaving the city in December 1975) with Debbi's parents. We spent 18 days travelling the Territory visiting old and new spots. We are most impressed with the new Darwin. However we still have many fond memories of the old Darwin before Tracy when we were younger and felt more immortal. Christ, who put those bloody large crocodiles (especially at Shady Camp) everywhere in places where we once thought we were safe crabbing and fishing and even swimming from our little ten foot cartopper boat.

Material things are not of major importance. Life cannot be replaced and serious injury cannot always be overcome. Sadly there are many true victims of Tropical Cyclone Tracy and for them and their friends, Christmas 1974 in Darwin was and remains a truly tragic event. Debbi and I were not victims. Severe Tropical Cyclone Tracy provided not only stern lessons in meteorology and the power of nature, but also a very clear demonstration of our frailty and what is important in life. We must not forget that demonstration.



Our Commonwealth Government House

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Our Own New House Was Ready to Occupy by Christmas

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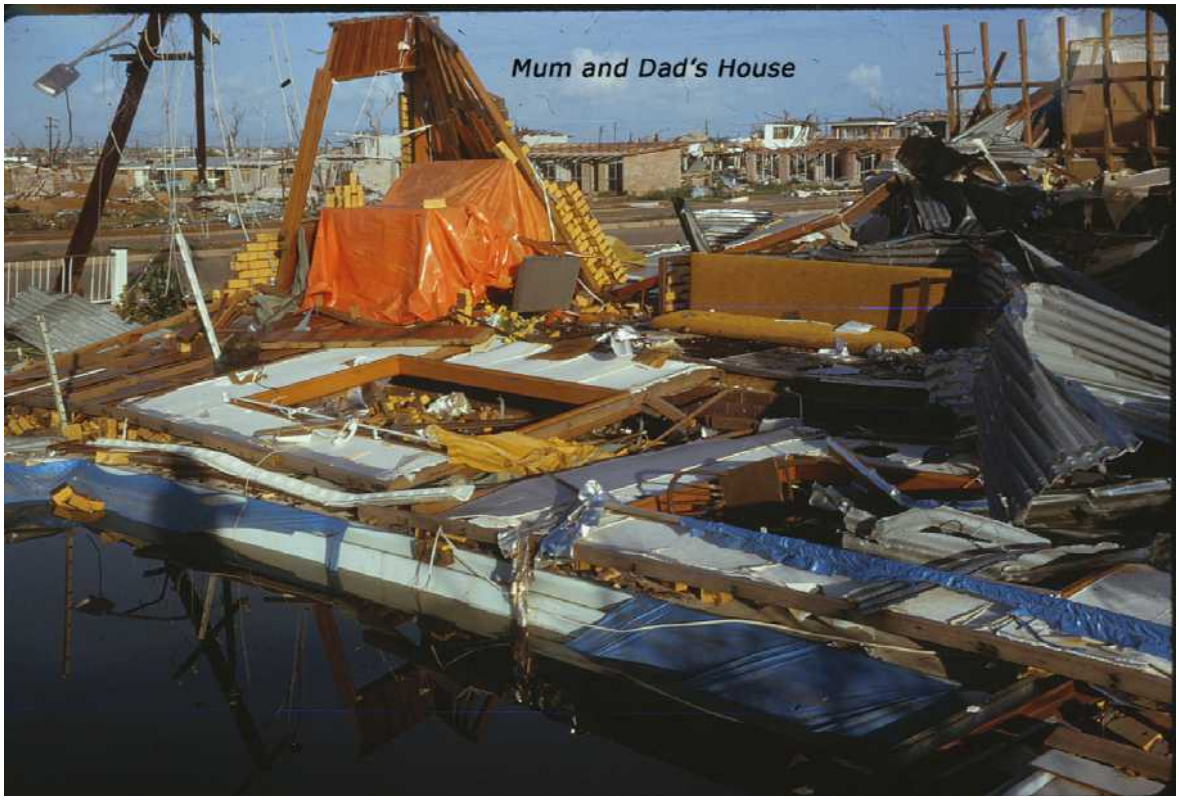
Debbi's Mum and Dad's House



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