

Watery Sauces Oldies and Boldies

Newsletter No 96

December 2021

Newsletter of the Water Resources Retirees Association

Situation Normal ...

... but certainly not SNAFU. A very delayed AGM was held on 3 October and the retiring committee was re-elected unopposed. Any reader who needs to be reminded of the membership can simply turn to the last page of this Newsletter for the list.

The reason for the delay was obviously the COVID restrictions plus vaccination hesitancy. The result was a smaller attendance than usual.

The venue may also have contributed somewhat to the reduced attendance. The committee hired a meeting room from Brisbane City Council which was very suitable for the purpose, but this was not attached to a place where a convivial meal could be obtained – unlike the old Public Service Club or the Victory Hotel.

The committee is on the lookout for a suitable venue for holding meetings and seminars. Perhaps somewhere outside the CBD that can be easily accessed by car and has parking? Any suggestions from members would be welcome.

From the Editor's Chair

For people of my vintage, the year 2021 has marked 60 years since we completed our secondary education (we didn't graduate until we completed our tertiary education).

For me, the anniversary is even more significant because it was in 1961 that I was awarded my scholarship with the Irrigation and Water Supply Commission. I went off to the University of Queensland (the only one in the state then), fees paid and with a living-away-from-home allowance of £6 per week. My board at St Johns College was also £6 per week, but my scholarship was taxed!

It has certainly been an interesting and fulfilling 60 years.

Until next time, au reservoir.

Ian Pullar, Editor

A New Co-Patron

The recent reorganisation of Government Departments resulted in the creation of the Department of Regional Development, Manufacturing and Water. This is clearly another successor to the old Queensland Water Resources Commission. Accordingly, the Committee approached Linda Dobe, Deputy Director-General, Water to take on the role of Co-Patron (along with Glenn Stockton of Sun-Water). She graciously accepted the role.

Linda has worked in state government water functions for more than 14 years with lead roles covering urban water supply planning and policy, safe and reliable water service provision, dam safety regulation and assessment of new bulk water infrastructure projects. Linda was also a member of the Department of Energy and Water Supply's renewal team for 12 months.



Prior to working in water, Linda worked for five years in the state government mines department on various policy and planning matters, stakeholder engagement and led the state's Indigenous Land Use Agreement for Exploration projects. Linda also has private sector experience in education, finance, and mining, where she worked as an exploration geologist for some years.

Programme for 2022

Because of COVID restrictions, it has been impossible this year to hold the customary Christmas luncheon. The Committee has therefore decided instead to have a New Year Celebration in early February, on a date and venue (but probably COTAH) to be determined.

..A technical seminar is being planned for April, again with details to be advised. The AGM will be held in early June, gradually bringing it back to the traditional April.

The second half of the year will feature celebrations for the Anniversary Milestone (see page 2 for more details).

*Best wishes for the Festive Season from
WRRRA, with great hopes for 2022*



Marking a Milestone, 100 Years On

(100th Anniversary in 2022 of passage of the Irrigation Act of 1922)



PROGRESS TO DATE An e-mail from the President was recently forwarded to all 200+members & thence to some 33 non-members, advising that he was hoping to extend an Open Invitation to attend Q100 reunions the WRRRA would like to take to the regions around August / October 2022. His intention is to invite all present / past colleagues to them (whether WRRRA members or not) as well as to a grand-finale Gala Dinner in Brisbane as close as possible to the actual 18 October anniversary date. Local day bus trips following each reunion and sale of appropriate Q100 memorabilia are also on the cards.

Whilst the flow of responses to the recent e-mail was initially promising, only 18 were received stating a definite interest in attending and specifying a particular centre/s. For our planning to get off the ground, we first need some surety and a much larger response before we can commit to outlaying any funds. So if you are interested but haven't responded as yet, **your reply to the Secretary by end of 2021 specifying a centre/s would be greatly appreciated** so that the committee can best concentrate its efforts.

REMEMBER, THE MORE RESPONSES WE GET, THE MORE LIKELY REUNIONS WILL HAPPEN!

SEASONS GREETINGS As we approach the festive season, we are able to remind members of a nigh-on 100yo Christmas Card unearthed by the Committee from 'The Commissioner and Staff' to the community of the Dawson Valley – complete with sketch of Nathan Dam. And in closing, we hope to catch you at one of the Q100 reunions next year!

Bruce Pearce & Gary Corbett
for the Sub-Committee



New Members

WRRRA welcomes new members:
Scott May, Rob Ayre, Dick Connor, Bob Sorenson and Jon Chapman.

We are always happy to have new members on board. You could encourage your friends

Anybody who watched *New Gold Mountain* on SBS would be familiar with Alyssa Sutherland who is the daughter of Ray Sutherland, our Honorary Auditor for many years.



Regretfully we record the passing of former colleagues.

David Paice passed away on 6 August aged 78 years and had a private family service as we were in lockdown at the time. Dave was formerly Deputy Chief Surveyor.

Vaughan Dollar died on 31 August. He worked in the Department of Local Government as a Draftsman and then joined the Construction Section as a Supervisor initially at various Aboriginal Communities. Transferred to QWRC, he worked as a Technical Officer in the Local Government Area before leaving in the early 2000s.

Clifford Wilbur Percy McLeod died on 11 October at the age of 86. Cliff was a Senior Engineer in Mechanical and Electrical Design.

Michelle Marce Hopgood passed away 23 October after more than five and a half years of treatment for metastatic breast cancer followed by 10 months of palliative care. She was the partner of Jim Mylne.

Vale Colin Paul Hazel 1941 – 2021

Colin Paul Hazel was born on 31 July 1941, to Colin Thomas Hazel and his no-nonsense but loveable wife Jean. Colin was younger than brothers Jim and Bruce and older than sister Carmel.

The young Collie-Paul attended primary school at Guardian Angels in Wynnum, where he would be in the same class as the older sister of his future wife. She was two years below.

He followed his brothers to Nudgee where he was the gymnastics champion, played first XV rugby for two years and was also selected as a GPS Representative.

In 1958 he was awarded a scholarship with the Queensland Government to study Civil Engineering at the University of Queensland. He excelled at Uni and spent his entire professional life working for the Queensland Irrigation and Water Supply Commission, later the Queensland Water Resources Commission, specialising in hydrology and hydrogeology, particularly groundwater and artesian basins. And he certainly became a specialist – a world renowned specialist in his field. The equations he developed to calculate aquifer transmissivity, among other things, are still very much used in practice and taught in universities around the globe today. Later in his career, he was also referred to in the media as a walking encyclopedia on blue-green algae.

In the late '60s, he made an impression with his work right across western Queensland when he was stationed in Longreach, where he also made an impression on the rugby league field for Longreach. He was a crowd favourite and they would loudly count each measured step backwards as he prepared for a conversion. Sometimes he even got them over.

Col was widely respected as an engineer and widely sought after as a consultant and lecturer well after he retired. Last week, the Australian Groundwater and Environmental Consultants posted a tribute which included that Col was a “true legend of hydrogeology and one of the kindest souls you would ever meet.” The tribute went on to say that “If we stand on the shoulders of giants, there was no bigger giant than Colin Hazel. He shared everything he learnt regarding groundwater and possibly contributed more in that way, than by deriving some of the most fundamental groundwater flow equations which will be used for centuries to come.”

While he would go on in his professional life to make an impact on the world, Sandra May Hulett would make her own impact ... and become his world. They overcame the initial hurdle of cultural difference ... he was from Wynnum and she was from Wynnum North ... but their love was so strong, they made it work.

In a union officially blessed by Pope John the 23rd no less, Colin Hazel and Sandra Hulett married at Guardian Angels on 20 April 1963 ... and got pretty busy. Paul was born 11 months later. Dan was born 14 months after that, then 13 months later Cathy came along; another 18 months and Jim was born. They then took their time for their fifth, a full 21 months before Robbie was born

To say he was a devoted husband, just isn't cutting it. He shared with Sandra the joy of having children. He supported her through the heartache of seven miscarriages. And together they held each other as they endured the unimaginable pain of losing a child in Cathy. All four of his sons grew up under the light of knowing truly how to love. Colin and Sandra's deep faith was also a driving factor in their partnership being unwavering. His love for her was limitless. He cared for her, nursed her and held her hand through her final journey ... in each other's company as she passed away. And because of his devotion, some of us feared that he would soon follow her.

But instead of going into his shell, in a way he extended himself further. He learned how to cook. He took to growing orchids and built an orchid house in the backyard, something of which he was very proud. He would drone on for hours and hours about his orchids.

But above all of the passions ignited or re-ignited after Mum died, was his leatherwork. The craftsmanship was extraordinary. He loved doing it, he loved teaching it and the level of his artistic creativity was mind-boggling. He loved his family above all else. He took so much pleasure in discussing the world with his sons, and revelled in watching his 13 grandchildren and two great grandchildren grow.

He was our friend and advisor. He was so often our first call as we were his. He was our Dad and he was our Grandad. And Mum was his world – for 50 years of marriage. And now Sandra has welcomed him home.

Abridged from the eulogy delivered by Col's son Robbie at his funeral.

Col Hazel was the last survivor of the four graduate scholarship engineers who joined the Commission in 1963: Robin Black, Ian “Charlie” Chalmers, Tom Fenwick and Col. He served two terms as Vice President of WRRRA – 1997-98 and 2005-07.

Thirty Years a Water Boy

Jon Chapman

While awaiting the delivery of a new caravan, Jon (shown in this 1996 photograph) penned this memoir to share with us - Ed.

I was a water boy for 30 years;
I was a public servant for 38!



But before that, I was born in Gympie; I was a farmer's boy; destined to stay that way it was assumed. Our farm at Bauple grew pineapples (mainly) and at times we ventured into corn, peas, beans, and there were the usual cows and pigs. Dad had a council job Monday to Friday and the farm was his after-hours job. In '75 or '76 my grandma asked what my plans were. I assumed the farm was the expectation, but Grandma said "If you stay on the farm, I may as well run this machete through you now!" Good advice, Grandma I'll be off then!!

A flirtation with fruit picking in Mooroopna and a try out at Gladstone came to zilch. I registered for the dole in Maryborough and on the same day acquired a temporary job at Social Security processing dole forms! In 1978, after doing the Public Service exam, I was offered a (permanent) job at the Titles Office in Brisbane. By 1979 I was back in Maryborough working for State Works where I stayed until June 1985. No one was leaving me a vacancy for promotion, so I threw my hat into the ring for the District Clerk, QWRC, Charleville! My WATER journey began!

1985 - 1888 – District Clerk (QWRC) Charleville

With a wife and two small children, I was off on the adventure of a lifetime in the middle of winter (June 1985).

David Ball was the District Engineer, Bob Whittington and Phil McNamara the boring staff and Tanya Moore the front office mainstay. As was Tanya's routine, the back door clicked at 9am, 12 and 1pm and again at 5pm; never a minute either way; didn't need a watch.

To say the learning curve was steep was an understatement, but with a few weeks hand over from Lloyd Armstrong, I learnt fast and survived. I believe I was the first "clerk" to be granted permission to fly to Brisbane to meet the hierarchy.

I remember a mountainous backlog of work. I remember cold winters and hot summers, evaporative cooling systems, bore water cooling tanks, red dust, and goat head burrs. Dave Ball left and was replaced by Craig Teske.

Everything in those days was typed. We did have a fax by the time I left and a wet/dry copier that was forever broken down! While I was there, the Commission was moving hard copy records to a new database, the Groundwater Database. To do this, temporary staff used a microfiche reader and transcribed bore drill logs to data sheets. These datasheets were sent off to Brisbane every week and someone in Brisbane entered them into the GWDB. It was boring, tedious work.

I learnt all about aquifers (Hutton, Hooray, Adori sandstone) and drilling terms and equipment. I found out why many drillers have hernia problems! I got to know drillers like Tony Howse and Keith Shelley while old timers like Barrie Rogers, and John Kennedy would drop in as would the Hydrographers Paul Martin and John Ridler. chasing a flood in the Warrego, Ward, Paroo or Bulloo.

I labelled hundreds of water samples and renewed and issued endless bore licences. One of my great joys was maintaining the huge wall map of the district and the pins for each artesian bore and the colour changed for the years they were last tested.

We were the senior office to Roma and as a sub-office to Longreach (sometimes) and Toowoomba (other times) I had many a drive to Roma, Longreach and Toowoomba, St George and everywhere in between. I hit a kangaroo in a Commodore sedan (busted the radiator) going to Cunnamulla one morning to collect Bill Day and John Ward. Dave Ball and I had a traumatic incident with a Falcon Station Wagon and an emu that crapped over everything and tore out the rear brake and fuel lines. I nearly collided with a herd of sheep just south of Tambo, racing to get a jackhammer to Bob Whittington when the Tambo town bore looked like it had died. It turned out a truckie had turned off a hidden valve at the washdown area that few people knew about!!

Through these years I got to work with Bevan Vanderwolf (I went to school with him), Denis Russell, Greg Grainger, John Palmer, Bill Mead, Greg Claydon, Darryl Kann, and others, but one stands out, John Grabbe! Turns out Grabbe was a pineapple farmer's son from Howard/Torbanlea, and we had a few shared tales. While at St George he started the designs for water harvesting schemes throughout the far southwest. Little did we know when having an ale or two at the Warrego Hotel in Cunnamulla one night (and morning) that the Cubbie Station story was just around the corner.

I camped by a fire of gidgee coal on Mt Margaret Station under a million stars, and was eaten by a million mosquitos on Nockatunga Station (a once Kidman and Co property that had recently been purchased by Kerry Packer). I was part of the logistics involved in the opening of Neil Turner Weir at Mitchell on a cold morning in June 1986.

Don Beattie visited us one Christmas and enjoyed a feed of BBQ rabbit with us!

A young cadet named Wally Kearnan started at the Lands Department while I was in Charleville. Wally is the current Valuer-General.

I made some good friends from those days including winning three premierships with the mighty Redcaps Cricket Club. I returned for the club's 30th reunion in 2000. I also accompanied Peter Zinn in a relief effort following the floods in 1991. One of my mates Paul "Potter" Taylor is now a councillor and for a boofhead shearer and hopeless opening bat, he has done OK.

Thirty Years a Water Boy *continued* **1988 - 1989 District Clerk (QWRC) Gatton**

As it had been for so many before me, escaping Charleville was a challenge; once the Commission got someone to Charleville it was always hard to get another to replace him when he left. Eventually Mark Warnick replaced me, and I went to a new office at Gatton in late 1988.

Having had a government house at Maryborough and Charleville, we faced buying a house as rentals were very scarce with Gatton College students taking every possible house. Challenge 1!

While the Commission had put a rush on getting to Gatton, there was no office upon my arrival in October. Dan Coutts was the chosen engineer and he and I spent three months driving to Brisbane and the Southeast Regional Office (SERO), most days. Challenge 2!

Through SERO I met several people who would be part of my life for many years to come: Mike McKenna (a former DE Charleville), Wayne Stewart, Bruce Brogan, Nigel Jeffares, Barry Lawson, Peter Hill, Gary Corbett, Graham Swann and more.

By early 1989 we had an office and Jim Kurtz (Boring Supervisor), Viv Wright (Farm Advisor), and Kevin Brown (Foreman) joined us. Soon after we were joined by Laureen Smith and Rebecca Mellon (Admin) and Peter Myatt (draftsman). The Lockyer Valley's "endless supply" of groundwater had almost dried up and the government was going to fix it (bit like it had in Biloela years before!). I spent a lot of time with Peter Hill uploading bore data and then with Laureen and Rebecca we issued nearly 1000 water licences in the Central Lockyer.

Tom Fenwick joined us for Xmas 1989 (just before we left) and was most complimentary of the job Dan and I had done to grow the office from a dusty concrete floor.

Back to Challenge 1. We bought a house and signed on at 12% interest. As the year progressed Mr Keating decided we had the "recession we had to have", and interest grew to 22%. Even though Leanne (my wife) worked as cleaner at the school we couldn't maintain payments and although I had said never, it was back to the bush and a government house for us; we had bugger all option!!

Alison Chaffron replaced me and rented our house and ironically as a negative geared asset we made money (\$7500) in the two years we were away from Gatton.

1990-1991 District Clerk (QWRC)/District Administration Officer (DPI) Theodore

We arrived a few days before Christmas, it was hot, and we wondered what the hell were we doing! Peter Moran was the DE and my first venture away from groundwater was about to commence. The Dawson Valley Irrigation Scheme was the focus, although I would see much more in the coming two years.

We shared an office with DPI and Forestry but between

them they had three staff, two of whom were hardly ever in the office. In water season not many of our staff were in the office either. The water joeys were always out and about. Their head man was Rod Basham, with Ian Sorensen, Don Collier and Colin Bendall in tow. We had a full workshop and a store in the depot. Cliffy and Cheyanne were the grease monkeys and there was a maintenance crew that worked across central region with Jim Barrie. The two based in Theodore were Steve and Jimmy. The admin team were locals and in a small town that was a can of worms!

Peter Moran left and in what was an unusual move he was replaced by Neville Wogandt from the Burdekin; Nev was not an Engineer!! Times were a-changing, but nothing like what was to come.

I was the third District Clerk in 40 years! Cec Kilvington had been there forever, and he was replaced by his understudy, Peter Guthrie, in the late '80s. Peter went to Biloela in 1989 and I replaced him. An Internal Audit in late 1990, was very unflattering of the past admin but a good thing in the long run. Sadly during 1990, Peter had a fall off a horse and died from the resulting injuries.

Theodore was a sub office of Rockhampton and we saw many a visitor from there and Biloela. Many road trips occurred between Theodore and Rocky, Bilo and Emerald. People like Mike McKenna, Mick Williams, Kerry Marler, Maurie Clewley, Kel Roberts, Bill Legg, Tony Bucknell, Bev Pratt, Gaye Nicholls, Tom Wallwork were often in Theodore. Kerry and Maurie had a fulltime job at the Cracow mine as I recall!!

In 1991 a bombshell hit the department and the office. In 1989 Wayne Goss was elected Premier and the new government set about changing and downsizing. After changing my title from District Clerk to District Administration Officer earlier in 1990, all admin was to leave by Xmas 1991, and while the water joeys had to stay the office was effectively sidelined and Biloela became the main Office.

Before going I had to arrange to sell off all sorts and years of accumulated equipment and supplies. Good plant and equipment, useful only to the DVIA went for a song, and the decline of Theodore began. Redundancies were on offer. They lost about five of us, a copper, a teacher, the DPI presence disappeared and soon after a bank closed; the spiral had begun.

The redundancies offered during this reorganisation saw hundreds of years' experience depart from the organisation. At the time I said the impact would be felt not immediately but in ten or fifteen years' time; more to come. The experience being lost was going to be hard to replace.

Both kids were now in school, but sadly Aaron who was now 6 was diagnosed with Type 1 diabetes. While the forced transfer caused anguish, it was, in hindsight, a blessing at a personal level.

To be continued ...

My Life of Hydrography

Part 7

Ray Alford

There were a few drawbacks with this instrument. The chart would do a complete rotation in one week necessitating frequent chart changes. The underwater sensing mechanism had a rubber diaphragm that was prone to failure and the chart scale was small, limiting the accuracy of the data. The sites we serviced were in the lower reaches of the Pioneer river. There was one just upstream of the town, one in the town itself and another at the mouth. The sites were all tidal with the water level constantly changing, and as the data from the charts needed to be extracted manually, this was a tiresome job which generally fell to me. These were also the first recorders that Bill entrusted completely to Geoff and me although I suspect this was more to do with Bill's dislike for Foxboro's than any great belief in our abilities.

Because of the tides, it was not necessary to try and obtain flow measurements at the sites. The data was preserved as "height only" and the only use for it was to record flood heights in the town. In hindsight, all the work done extracting the tidal heights was probably never used. The Commission operated the sites on behalf of the Pioneer River Improvement Trust, a body comprising both Government and local interests with the aim of protecting and improving rivers. It didn't take me long to decide that the river improvement part was an oxymoron.

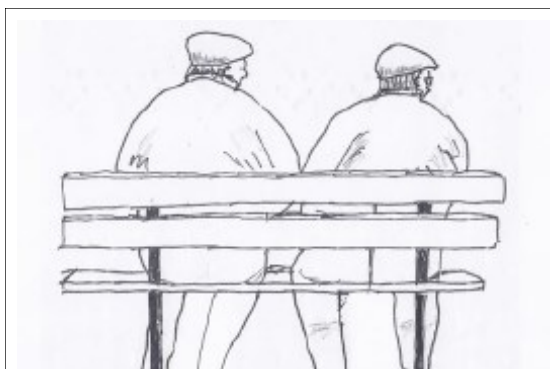
Rivers flow because of the slope of the river bed. The potential energy stored as a result of the elevation of water is turned into kinetic energy which powers the stream. The downstream forces acting on the water are counteracted by the friction of the bed and banks thus slowing somewhat the velocity of the water. During a rain event, when the cross section of the stream can no longer contain the amount of water, the water spills over the bank and across the adjacent flood plain. The friction caused by trees and scrub along the top of the bank acts as a brake, slowing the water and depositing silt that had been carried by the turbulent water. This silt slowly builds on the banks of the river, causing a natural levy bank, rich in nutrient, and covered in vegetation.

Farming practice since the area was first developed, was to grow the crops (mainly cane) right to the top of the bank. This area was very fertile and productive. The top of the banks was cleared of trees and replaced with the crops. The problem was that the roots of the trees held the banks together, and without them, the land would slip down into the river eroding back the land available for agriculture and upending the remaining trees growing further down the bank.

The answer of course was to replant the vegetation to stabilise the banks but this would have required the relinquishment of the arable land. The solution devised by the River Improvement Trust was to line the river bank with rock to prevent the erosion. The rock walls had a much lower friction than the trees, thus the river moved more quickly and could carry more water for a given height. The unintended consequence was that the sediment did not settle on the banks and adjacent flood plains and was instead carried to the lower reaches and mouth of the river. The increased peak flow and silted river added to the flooding risk of the town. The absence of trees along the river bank was also a blow for the wildlife that depended on them and the fish that relied on the overhanging branches for food and shelter. The Pioneer River Improvement Trust was only one of a number of bodies along the Queensland coast to adopt the rock fill solution.

Bill Sticklan was a pleasure to work for. I don't think that I ever saw Bill upset about anything or anyone, until the one time that Geoff and I seriously put his sense of humour to the test. Bill looked after his equipment very well, conditioned no doubt, from his time in the army. His annual stocktake was meticulous for example, still listing a "repair kit, puncture", from a vehicle long gone. If I was doing the stocktake, that tin with the patches of rubber and dodgy vulcanizing strips would have been in the bin long ago. He also meticulously cared for his vehicle, ensuring all the servicing was carried out and that it was driven sensibly. He always envied the vehicle that his friend Foden was issued with at Eungella. He showed me that Toyota one day when we were at the dam servicing the instrumentation, pointing out the four forward gears, syncromesh on first no less, and a heater, along with other features not on Bill's Landcruiser.

Continued next page ...



"My grandson doesn't think I know the meaning of 'hip'. I do and I hope it gets replaced soon."

My Life of Hydrography *(continued)*

Government vehicles were replaced on mileage or time and eventually Bill was issued a new vehicle with all of the new features. He was very pleased but a little nervous about his two younger co-drivers.

One of the stations operated from Mackay was located on Denison creek at Watarah station south of Nebo. Bill entrusted Geoff and me to service the site along with other nearby stations not long after the new Landcruiser arrived. It was getting late in the day as we turned off the Sarina road and headed down the bumpy track towards the site. Not far from the turnoff, the track crossed the main Moranbah rail line, two heavy rails of steel embedded in blue crushed basalt ballast. This had not been an obstacle on previous visits to the station, but on this occasion, as we straddled the track, the rear wheels sank into the blue metal causing the tailshaft to come down on the rail, shearing it from the differential. This was not good. Geoff engaged four-wheel drive but the front wheels dug into the ballast and the front tailshaft suffered the same fate as the rear. This was even worse. There was no handy tree in front of the truck to attach the winch and we had no idea when the next coal train was coming. These trains were monstrous, three locos in the front, two in the middle and about a mile of coal wagons. Not much we could do but start unloading the vehicle to save as much equipment as we could. As we worked, we spotted a man working on signal equipment beside the line. After we got his attention, the look on his face went from incredulous to something approaching panic and he told us that a train was almost here, at which point he took off, running up the train lines as fast as he could go. Not too long later, the spotlight of the train approached accompanied by the scream of steel brakes and cacophony of noise. It finally stopped only meters from our position. The railway guy towed the disabled Landcruiser clear of the tracks and kindly gave us lift to Sarina where we arranged for the vehicle to be towed back to Mackay as well as a lift back home for us. The worst part was showing up at Bill's house that night and breaking the sad news about the new Toyota. Bill didn't chastise us, but the look on his face said it all. I guess it could have been much worse, the Landcruiser wasn't a total loss. It was several more years before I managed that feat.

The Snowy Mountain scheme was a huge engineering achievement, the largest engineering project in Australia so far. The combined hydroelectricity and irrigation project was a daunting challenge at the time requiring expertise in engineering and hydrology that Australia didn't have. To fill this knowledge gap, The United States Bureau of Reclamation, the world authority in this type of work, was asked to provide training and technical assistance. The scheme design required good streamflow data and hydrological analysis for success and because of this requirement, the Snowy Mountain Engineering Corporation (SMEC) became the leading hydrological authority in Australia.

In the 1960s, it was to this organisation that the Commission turned when tasked with vastly increasing the number of gauging stations in Queensland. The Federal Government had heeded the need for long term streamflow records and was prepared to fund the expansion. Many new stations were required.

Up until this time, gauging stations were situated at places where a reliable person could be found to read the gauge boards. This was usually at a station property or within a town. While this was a necessity for daily read stations, this criterion didn't apply for automatic recorders. The main consideration was the data requirement. Where, on the river, was the data required? The placement of gauging stations within catchments is called network design. The idea is to have sufficient stations to assess the water resource at any point along the river system. Once the general location is nominated, a suitable reach of the stream is chosen. To enable a height/discharge relationship to be developed, the flow must be contained within the banks for as high a water level as possible. Another consideration is ease of access as the site will need to be accessed to obtain flow measurements and service the instrumentation. SMEC was very good at network design but paid little heed to this last consideration.

The locations of most of the stations around the Gulf of Carpentaria were chosen by SMEC. Being an engineering company, it located stations at potential dam sites where the geography of the terrain offered containment of flows and where the data would be most valuable for dam yield and design analysis. These sites were remote, and during the second year of my cadetship I found out just how remote some were.

The gulf sites were operated from the Townville office. During the wet season, access was very difficult and sometimes impossible. The main road to Mount Isa was still dirt from Hughenden to Cloncurry with low level bridges across the major streams. The wet season was also the only time of the years that most of the stations experienced stream flow. In order to obtain measurements and service the instruments, a hydrographic party from Townsville was stationed at Mt Isa between Christmas and Easter. For the wet season of 1974, the party leader was John Pitts but by mid-February the offsider had had enough and quit. Roy Mincher had a spare cadet (me), and I soon found myself sitting next to Roy in his Landcruiser as we sloshed and slid our way towards Mt Isa.

... to be continued.

Memories of Leslie Dam

Part 5

Hector Macdonald

A few days after Taylor's edict on snakes one of the office girls who was coming through the wire gate leading to the office area let out a high C note, with enough volume for all in the office to hear. She had seen a snake. Everybody in the office sat tight (including me) except Alex, the union organiser who was employed as a clerk, and whom Taylor regarded as a bit of a communist. Alex managed to find a long-handled shovel outside the office and confronted the snake. It was a five foot tiger, a vicious creature when threatened and it stared at Alex, its head kept about 18 inches off the ground, the neck behind its head flattened out, and a continual hissing sound coming from its mouth. Alex stood well back from the snake and holding the shovel in one hand right at the end of the handle, made an arc through the air to allow the blade of the shovel to fall on the snake. He missed the first time but the second and third falls of the shovel found their mark. He kept repeating the process until the snake had its back broken in three or four places. I thought Alex was a hero and always remembered what I would do if I had to kill a snake and was lucky enough to have a long handled shovel with me. I don't know whether the appearance of the snake or its killing by Alex was a source of annoyance to Taylor, but Alex did leave the job about a month later. Maybe his niche in life was in the union movement. I saw him from time to time over the next 25 years and when I did see him it was always in the vicinity of the old Trades Hall in Upper Edward Street which I think was demolished in the late 1980s.

One of the extra-curricular activities at the dam was the operation of the Leslie Dam Fire Brigade. Bob Kimber, a sober hard-working and career-minded man, was the local fire chief. He had a band of about ten select men who reported for training one night a fortnight. They had their own special fire truck, painted bright red, which was to be used exclusively for fire fighting. As well as this, all the kit normally associated with a brigade was supplied – hoses and brass fittings, a water tank on a trailer with its own pump, knapsack sprays, beaters, rakes, axes, fire extinguishers of all types, overalls, boots, gloves, and of course, bright red plastic helmets. The need for a local brigade was obvious and Bob ran a good team – men who lived on site and could be relied upon at short notice. Every practice night the alarm was tested – I think they used the same siren as was used to signal start of work at 7.30 and the knockoff at 4.30 – except that it was rung with a few pauses in between to make it sound as if was heralding a catastrophe.

Unwary pedestrians such as myself who were walking to the canteen of a night from the barracks had to be careful not to be knocked over by a vehicle careering throughout the staff lines, piled high with fierce looking men, dressed in red helmets, wielding tomahawks, and shouting hysterically as they headed off to their pretend fire.

Oddly enough one night there was a real fire. I was in the canteen at the time, drinking beer and playing darts but news spreads fast in the bush. Obviously it was our duty to assist where required. We quickly finished our beers, made a note of whose turn to shout it would be when we returned, and headed off for the action. Unfortunately for the brigade, who were looking for a bit of action, it was just a grass fire on the edge of the township with no threat to life or property. No heroes tonight. While the members of the brigade were busy with their knapsack sprays, beaters and rakes, one of the spectators from the camp spied this magnificent chemical fire extinguisher in the back of the fire truck. Like everything else it was painted red and had a hose with a funnel on the end for spraying out copious volumes of carbon dioxide gas. The sight of the extinguisher sitting there was too much for this chap. He picked it up and as he started to head off for the fire asked me if he could use it. I told him that I didn't care. Eventually the fire was brought under control, we all lost interest in the entertainment being provided, and went back to our beer and darts.

The next day I had expected Kimber to be parading around the camp with his chest out accepting accolades from everyone on the magnificent job that the brigade had done in controlling the fire. However, this was not so. Kimber was in a filthy mood and I inquired as to the reason. "Some stupid fool took our best chemical fire extinguisher last night and emptied it on a grass fire. I hope now that the workshop has a fire. It should teach that fool a lesson." I don't think the 'stupid fool' was ever identified. Had he been, I feel sure he would have mentioned that I had authorised the use of the extinguisher. For me it was a simple but effective learning experience, and the principle contained in this experience was something I kept in mind for later life.

One morning in July, Taylor told me that the Project Planning Branch in Head Office was investigating a new damsite out near Inglewood, a couple of hours west of Warwick by road, and that they intended doing some soil investigations on site. The dam, to be named Coolmunda, was to be an earthfill structure with a concrete spillway and large radial gates on the top of the spillway. The earthen wall of the dam was to be about a mile long and so suitable quantities of earthfill had to be found. Also the foundations had to be tested.

Continued next page ...

Memories of Leslie Dam (continued)

To do this work it was necessary to hire a drilling team from the private sector to come on site for a few weeks and put down holes and collect soil samples for subsequent analysis. Project Planning wanted an engineer to go out to Inglewood for a couple of weeks to supervise the operation and Taylor asked me to do the job. The next week I spent a few days in Brisbane at Head Office being briefed on the job by John Morse, the Executive Engineer, Project Planning. He told me that I would have a gang of men on site to help with the job. The gang would be headed up by Frank Lennon, a Senior Works Supervisor, who was based at Goondiwindi, plus a few other men who had a tip truck, front-end loader etc. For at least part of the job we would be camped on site near the bank of the Macintyre Brook.

The group of men in Frank's gang were top guys. They put up a few tents and organised facilities for cooking and washing. I slept in the camp under a tent and helped with the cooking and maintenance of the camp. The weather at Inglewood in July and August is cold. It is especially cold when camped on the bank of a creek. One morning I could not find any water to shave. Everything was frozen. Eventually I found a can which had some water that had not turned to ice. I set up a work table under a wild fruit tree which was covered in pink and white blossoms. Above the tree canopy was the clearest blue sky imaginable. There was frost and ice everywhere. While shaving with the cold water other members of the camp came over to look at me. They shaved at night when having a hot shower after work using water heated during the day in a copper. They all thought I was mad. I told them that you had to be tough if you lived in the city.

The drill which we hired was the best available at the time. It could drill a hole three feet in diameter to a depth of over 20 feet. It removed the material from the hole and placed each bucketful of material on the ground in its own pile and stacked in a row. As each bucketful was taken from the hole, the depth of the hole was measured and each pile was then labelled, indicating from what depth it had come. It was a slow and tedious process and hard for me to organise because of the difficulty in trying to convince the operator of the drill that we were not interested in drilling holes as such (he thought the faster he drilled a hole the happier we would be), but rather in collecting accurate and reliable soil samples from various depths at a number of locations along the axis of the dam.

Answers to Terry's Trivia on page 11

1.(v) Melbourne. 2. (iv) Hippocrates 3. (iii) Tera-byte 4. (ii) Ponzi 5. (i) Titan 6. (ii) SA 7. (iii) 2014 8. (iv) Mozambique 9. (i) Norway. 10. (ii) cat.

While working out in the open country during the day the weather was extremely windy and bitterly cold. We had the occasional hitch from time to time and John Morse queried the progress. Frank Lennon told him that the work was being done in the coldest weather he had experienced in the area, and he was not exaggerating.

On Friday afternoon of the first week we all stopped work early and I headed back to Leslie Dam, being there in time to catch my lift to Brisbane with Les Warren. The next Monday I left the Dam early, around 6, so as to be on the job when the men started at 7.30. In those days the road to Inglewood was no highway and parts of it were gravel. My vehicle was an EK white Holden utility and it was almost new. On the way out a large truck travelling in the opposite direction passed me on a bend on the gravel road. The weather was dry and I knew that when the truck went past I would be travelling into a cloud of dust. As the truck approached and drew level there was a loud crack and the windscreen turned white. It had been hit by a stone thrown up by the truck. I was travelling around a bend on a gravel road and could not see a thing. Where was the road, and, more importantly, where were the trees? As part of an immediate reaction to the problem I put my right fist through the window screen. It worked. I could now see the dust, see the road and I could also see blood over my right hand. However the good news was there was no longer the danger of an accident. The cuts to my hand were only superficial (the glass in those days was 'safety' glass and it turned to crystals about half a centimetre in diameter) and I wrapped my handkerchief around it.

Frank Lennon was an easy person to work with. He was also great company. Taylor had warned me before I left Leslie – "Don't try to drink him under the table". It was good advice. Frank was a big man, broad-shouldered and well over six feet. I think he could drink a keg if he had to.

... to be continued



St Barnabas Bulletin Board

Sunday morning service Sermon:
"Jesus Walks on the Water"
Evening service Sermon:
"Searching for Jesus"

HEALTH *and beauty*

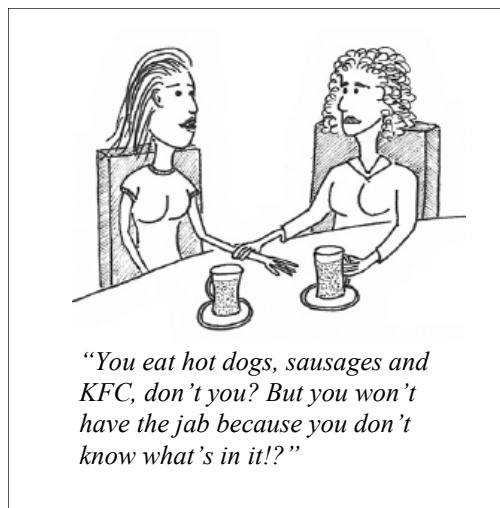
A Little Nagging Can Go a Long Way

Some men have been known to complain that their wives nag them. But if this is the case, they probably have more reason to be grateful than resentful. Studies have shown that married men are 6% more likely to go to a doctor than single men. Is that the line of least resistance?

However, single women are just as likely to go to the doctor as married ones.

Both men and women in committed relationships are more likely to do regular exercise, adding years to their lives. Studies have shown that women in a relationship are 34% more likely to keep fit through regular exercise, while married men are 20% more likely to go out for a weekly run.

The key to a longer life for men appears to be for them to embrace the two common phrases "I do" and "Yes dear."



Henri de Toulouse-Lautrec 1864-1901
Au Salon de la Rue des Moulins

*"I'm so tired. I could do with a good night."
"Your customer had one which is why you're so tired."*

Brown Eyes Feeling Blue

Women with brown eyes are more than twice as likely to feel down when the weather is bad, a study has shown.

Researchers found that those with dark eyes were at twice the risk of Seasonal Affective Disorder, also known as SAD, than those with blue eyes. This is because dark eyes let in less sunlight, affecting the production of the "happy hormone" serotonin.

Blue eyes may have developed in European people 10,000 years ago to help protect them from the depressive effects of the winter months.

It Augurs Well for the Future

Now that COVID restrictions are being eased, it augurs well for a brighter future (although I have heard people, who presumably have misheard, say "it all goes well for the future.") But that forecast is for the birds – or at least it once was.

The words 'augur', 'inauguration', and 'auspices' are all derived from the ancient method of foretelling the future by divination from the flights of birds. 'Augur' is a contraction of the original Latin word for 'bird' *auger* and the verb *gerere* 'to manage'. 'Auspices' comes from *avis* 'bird' and *specio* 'watched'.

The augur fulfilled a most responsible function in the national life of the Romans. No government would embark on an important venture without having first consulted the appointed official. His considered opinion, based on his reading of the birds, would determine the course of action. This also explains why people wait for the 'auspicious' moment to ensure success. This meant that approval was given by the gods and conveyed by their messenger birds.

Exercise those Brain Cells

Q. James Murray, the compiler of the first Oxford Dictionary, was an avid collector of words and phrases. The following collection leads to one inevitable conclusion in time:

HEART OF STONE, LEADING LIGHT, DEAD END, TOP ACTRESS, MIDNIGHT, WEDGETAIL
What?



Answer to last Issue's Teaser

A. The next palindrome after 15951 is 16061. He has travelled 110 km in two hours at an average speed of 55 km/hr.

The Speech that Never Was ... but Is

Five decades after his assassination, US President John F. Kennedy can now be heard delivering the speech in Dallas that he never made.

Engineers have used new technology to recreate the voice of the 35th US President delivering the speech he expected to deliver on 22 November 1963. A copy of the text of the speech was preserved and given to Vice President Lyndon B. Johnson who became President.



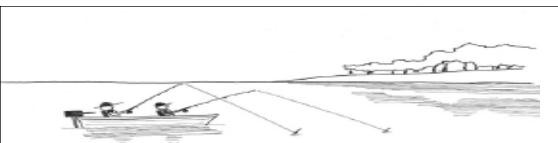
Now the speech, which was 2590 words long, has been digitally created as part of *The Times* of London "JFK Unsilenced". It took eight weeks to create by analysing more than 800 of Kennedy's recorded orations. The engineers pulled almost 120,000 sound bites from these recordings to capture the authentic sound of Kennedy's famous voice. Particular attention was paid to pitch and energy. And it appears that the speech still has unusual relevance today.

How Times Change

The following letter to the editor was published on 8 July 1922.

IS IT any wonder that so much unemployment exists when one sees hundreds of young girls coming to work in beautiful motor cars from well-to-do families, filling positions in government jobs. The banks and the Department of Repatriation are all overflowing with girls who occupy positions that married men are trying for. In my opinion they could make themselves useful at home, and in the event of one of them getting married they may be able to boil water without burning it. The only thing for a man to do now is to take on domestic work. They may be a little clumsy at dusting but it appears to me there is not much else to do as washing, scrubbing and ironing is "exempt". In their spare time they could drive the car, garden, attend to the horses, or do some milking.

Unemployed male, South Brisbane.



More women are murdering people these days. If you ignore the context, that's a real sign of progress.

A Sign of the Times

On the rest rooms at the Adavale Pub
(spotted by Alan Vizer years ago)

"Wipe" and "Shake"

Terry's Trivia

Answers on page 9.

1. Which Australian city is a UNESCO City of Literature: (i) Sydney; (ii) Newcastle; (iii) Perth; (iv) Canberra; (v) Melbourne.
2. Who is regarded as 'The Father of Medicine': (i) Aristotle; (ii) Pythagoras; (iii) Pericles; (iv) Hippocrates; (v) Thucydides.
3. What unit of information is one million million bytes? (i) Megabyte; (ii) Gigabyte; (iii) Terabyte; (iv) Petabyte; (v) Exabyte.
4. Which Italian name stands for fake investment schemes? (i) Silvio Berlusconi; (ii) Charles Ponzi; (iii) Giorgio Armani; (iv) Robert De Niro.
5. Which is Saturn's largest moon?: (i) Titan (ii) Rhea; (iii) Dione; (iv) Tethys; (v) Enceladus; (vi) Mimas.
6. The Onkaparinga Council is in: (i) Victoria; (ii) SA; (iii) NSW; (iv) Tas; (v) WA.
7. Chinese President Xi Jinping last visited Australia in: (i) 2012; (ii) 2013; (iii) 2014; (iv) 2015; (v) 2016; (vi) Never.
8. The flag of which country has an AK-47 superimposed on a book: (i) Tanzania; (ii) Rwanda; (iii) Sudan; (iv) Mozambique; (v) Libya; (iv) Mali.
9. Israel, North Korea and Bolivia are three of four countries that have military conscription for women. Which is the fourth?: (i) Norway; (ii) Switzerland; (iii) Bangladesh; (iv) South Africa; (v) Canada.
10. Chartreux and Nebelung are types of: (i) Dog; (ii) Cat; (iii) Hamster; (iv) Budgie; (v) Lizard; (vii) Cake.

The Perils of Zoom

A hushed solemn silence pervaded the room;
we were watching a funeral service on Zoom
when at the committal, the end very near,
a voice cut the air waves so loud we could hear -
"Just a moderate oven, I'm sure that will suit."
A couple, still cooking, had forgotten to mute.

Book Club

People who have watched *Pointless* (from British television) will be familiar with Richard Osman who is the trivia wizard who provides both the questions and the answers. He has recently added another string to his bow with the publication of *The Thursday Murder Club*. The promo bills it thus: "In a peaceful retirement village, four unlikely friends meet up once a week to investigate unsolved murders.

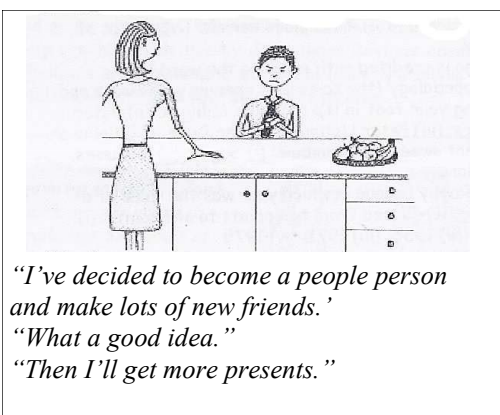
"But when a brutal killing takes place on their very doorstep, the Thursday Murder Club find themselves in the middle of their first live case.

"Elizabeth, Joyce, Ibrahim and Ron might be pushing eighty but they still have a few tricks up their sleeves. Can our unorthodox but brilliant gang catch the killer before it's too late?"

Our members will empathise with the setting and revel in Osman's humour as well as his characterisation and ingenuity. This is unlike any genre I have come across. Helen has described it as "quite silly but very enjoyable." I concur.

Ian Pullar

P.S. Richard has followed this up with a sequel *The Man Who Died Twice* (equally enjoyable) and I understand a third one is to follow.



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You may have noticed that by far the greatest contributor of book reviews is me. In an attempt to provide readers with a wider spectrum of titles, I have prevailed upon some members to provide title, author and a simple descriptor of something they have enjoyed. Here are some. Other readers are invited to contribute further. - Ed.

(From Helen Scheu) Ian Mortimer:

Time Travellers Guide to Medieval England;
Time Travellers guide to Elizabethan England;
Time Travellers Guide to Restoration Britain

Written from the perspective of a modern person visiting the era rather than how it was then. Great reads.

(From Jon Henry) D. T. Moore, T. G. Vallance, and E. W. Groves (2001) *Nature's Investigator: The Diary of Robert Brown in Australia 1801-1805*. Interpreted from the cryptic diaries of the botanist who circumnavigated Australia with Flinders in the *Investigator*.

(From Peter Gilbey) Gregory Day *The Archipelago of Souls*. This very interesting book deals with the tribulations of a soldier who fought in Crete during World War II and has difficulty adjusting to civilian life on his return, settling on King Island in Bass Strait

(From Chris Robson) Michael Rowbotham, *The Suspect* and *Bleed for Me*. Both books deal with many aspects of family and community relationships and risks, bound up in crime related dramas in contemporary settings. They are written from the perspective of the central character, a psychiatrist who is caught up in these dramas. Compelling and hard to put down.

A Literary Dilemma

A well written book that may soon be a favourite is one I obsessively read to the end but at the same time I so much want to savour it; compulsion and languor are so hard to blend. To tell you the truth - and there's no way to flavour it - I've persisted with some that were better not penned.

