



ECHOES FROM THE PAST AND PRESENT

"Man is a history-making creature who can neither repeat his past nor leave it behind." W. H. Auden (1907 - 1973)

CONTENTS

Editorial 1
Faded Echoes2
Reunion in 2005?5
Darwin Ceremony 5
Cape Don, 1995 6
Horn Island, 1941-427
7RS Celebrates Again 8
Personal Notices 8
Radar Developments9
A New Radar System9
OTHR To Be Enhanced9
New Home for Wedgetail9
Command & Control System 10
Surface Radar in Torres St 10
J.Aust. Naval History 10

EDITORIAL

This must be the saddest issue yet of Radar Returns. Many of you will already know and the rest will be shocked to learn that its founder (in 1995) and editor of all 26 issues so far circulated, Wing Commander (Ret'd) Peter G Smith - Pete to everyone who knew him passed suddenly away on 22 April aged only 51. We who are left grown old find that fact hard to believe and harder still to accept. A tribute to him will be found elsewhere in this issue (see p. 4).

Radar Returns

An immediate practical consequence of this tragedy has been the need to begin making plans for the continuation of Radar Returns - for everyone with whom we have discussed the question has insisted that it should be continued.

Pete had planned to publish this issue in the week or so after his death, so the first problem was to find a way to get it out as quickly as was feasible. I have undertaken to do this while discussions proceed as to what might happen



Pete Smith

in the future. It is comforting to be able to report that a possible, more permanent, editor has emerged, and will, we hope, be confirmed in the task quite soon. Several of the older veterans with publishing experience have offered to be available as advisers and helpers. We are determined that the publication should continue for as long as there is a need for it, especially from among the WW2 veterans.

A note on belongings

Pete's wife, Corinne, is sorting out and packing the large amount of material relating to radar matters that he had accumulated. She has asked that anyone who lent Pete photos or other memorabilia and would like them returned should let me know as soon as possible. Of the remainder, some will go to the RAAF Museum at Point Cook and the rest to the future editor of Radar Returns.

This issue

Much of the material in this issue

was in Pete's computer, and my task has been to order it, edit it and shoehorn it in. As we must expect, the 'Faded Echoes' section grows more dominant, but we have been able to include several interesting contributed articles, a report on the plaque-unveiling ceremony in Darwin on 3 June, a note on a possible RAAF Radar Veterans reunion in Victoria (probably Geelong) in May 2005 and some information on new developments in radar systems and structure within the RAAF. A new 'Personal Notices' section gives people space for seeking help from our readership.

Finances

Printing and postage are costly. There is enough in the kitty for this issue, but not for the next. If Radar Returns is to continue we will need either more people making contributions to it or the introduction of a subscription scheme. We prefer the

If everyone on the circulation list were to contribute \$5 a year, we could produce three isses each year. Though some have made much bigger contributions than this, just over two-thirds of those who receive it have made none. Please let us know if you do not wish to receive it so that we can rationalise the distribution list.

Cheques or money orders, please, made out to Radar Returns and sent to the address below.

Warren Mann (Acting Editor)

Till further notice, please address all correspondence for Radar Returns to: Radar Returns,

C/- 39 Crisp Street, Hampton, Vic 3188

Phone: 03 9598 2193; Fax: 03 9521 6724

Email: whcmann@optusnet.com.au

FADED ECHOES

If you can provide further details on anyone mentioned in this section, please send them to Radar Returns so that their histories can be accurately recorded. [Editor]

Vincent Leslie Gertzel

Born 10/01/1918, died 23/08/2003 Further to Ray Sewell's note on Vince Gertzel in Radar Returns Vol 8 No 3, Vince joined up in Perth and completed one of the early courses as an operator.

I met him at Townsville as 50RS assembled prior to setting up the first LW/AW to fly into a war zone. The unit covered the Buna/Gona campaign at Dobodura in November 1942 until April 1943. He was posted to Rottnest Island on his return from the Pacific and subsequently went to North West Cape.

On discharge, Vince rejoined the RAAF and went to Japan. He was stationed at Hiroshima.

Later, Vince joined the PMG (now Telstra) as a technician. Upon his retirement Vince and his wife travelled widely (they went to PNG 15 times).

He was a gentle man and a unique individual, a good friend and mate who is sadly missed by many. Our sincerest sympathy to his wife, Carrie, and her sons

Jack Fraser

William (Bill) John Humphries

Born 09/02/1922, died 19/10/2003 Born in Kerang Vic, Bill joined the RAAF on the same day as I did (06/08/1941). He completed an early mechanics' courses at RMIT. We met up again at Point Lookout on Stradbroke Island working on the MAWD. We were both posted to Townsville to get to know the new LW/AW prior to the move to Dobodura. After a month, Bill was posted to 305RS and then on to 330RS and 332RS. All those who served with him noted his practical knowledge and experience.

He was a great mate. We flew home on the same aircraft in December 1943 and Bill was best man at my wedding on 3/1/1944. We attended reunions together includeing, most recently, Adelaide 2003. He always called a spade a spade. He worked for the Dept of Civil Aviation until his retirement. We who knew Bill will miss a good mate in service and a friend for life. Our sincerest sympathy to Margaret and her family.

John (Jack) Fyfe Angus

Jack Fraser

Born 30/12/1916, died 01/11/2003
Jack enlisted in the RAAF on 27
April 1942, trained as an RDF
mechanic and served with 36RS,
14RS and 369RS (sic). On
discharge in November 1945 he
returned to the State Electricity
Commission of Victoria, for whom
he worked as an accountant until
his retirement in 1976.

He left two children, six grandchildren and nine great-grandchildren.

John G. Angus [UK]

Harry Clive Minnett OBE

1918 - 2004

We extend our deepest sympathy to Adam and Kate on the death of their father, Harry, of Castle Cove, NSW, but are most thankful for his life. Following his graduation with science and engineering honours at Sydney University in 1940, Harry joined CSIRO Radio Physics Laboratory for Radar Research. Under guidance from senior staff, he made a significant contribution to both the Army Shore Defence Radar and the RAAF Air Warning Radar.

He was invited to join the NSW Radar Air Defence Branch in 1995 and supported Branch activities and the national reunions in Nelson Bay and Canberra organised by the Branch in 1995, 1999 and 2000. He was the main contributor to the Branchsponsored book *The Boffins of Botany Bay* edited by Professor Roy Macleod, Sydney University (1999). This book dealt with Radar at the University of Sydney 1939-

45, including the CSIRO. Harry will be long remembered by his friends in RAAF Radar WWII for his contribution to a most effective Australian-designed and manufactured Air Warning Radar, deployed mainly in New Guinea, New Britain, the Admiralties and Borneo (noting also the purchase of this equipment during WWII by the US Air Force and the RAF). It is a pity that the world has to lose such men as Harry Minnett.

Harold Victor Wilkinson.

Born 13/11/1921, died
Harold joined the NSW Radar Air
Defence Branch on 1 July 1989
and attended a number of its
functions with his wife, Raya,
including the 50th Anniversary
Reunion at Nelson Bay in 1995.
He was educated at Fort St High
School and joined the RAAF in
October 1941 as trainee aircrewAC2.

He remustered to a radar operator trainee in 1942 and became corporal in December 1943. Like most of us he was discharged early 1946. Harold qualified and worked as a skilled tradesman after the war. We extend our deepest sympathy to Raya on the death of her husband, but we are most thankful for his life

Walter Eginton

Born 06/08/1925, died 23/03/2004

Walter was born in Vancouver, Canada and joined the RAAF shortly after his 18th birthday and trained as a W/T operator. He was posted to 114 Mobile Fighter Control Unit on Morotai and later to 354 RS at Tarakan.

After his discharge, he married Joy and went to Port Moresby to help his parents in managing their hotel and scrap metal businesses. In 1975, Walter returned to Australia to join the Civil Aviation Department as an Inspector of Supplies. He retired in 1987 and spent more time at his favourite hobby, fishing.

Walter was a member of the NSW Radar Air Defence Branch; he and

Joy attended many branch functions until his health deteriorated. We extend our deepest sympathy to Joy at this sad time.

Ronald William Eric Harnath

Born 9/8/1921, died 29/1/2004

To his family he was Ron, but in Air Force days he was always known as Bill. From early years Bill played around with crystal sets, so it was natural for him to get a job with the Melbourne Broadcast Station 3UZ. It also necessarily followed, that, when war broke out, Bill joined the Army Signals Regiment. However, on 08/10/1941 he moved over to the RAAF to enrol in the Radio Mechanics course at Richmond NSW.

Bill's first overseas posting was to be Milne Bay but, because of changes to the Bay, he was diverted to 29RS at Port Moresby, located adjacent to Murray Barracks. He was highly regarded as an energetic, enthusiastic corporal mechanic. He was at 29RS when, one stormy night, a guard was electrocuted by the 240v AC distribution line feeding the beacon on the adjacent hill.

Over the years Bill served at a number of stations and gave the RAAF excellent service. He was discharged as a Flight Sergeant on 1/10/1945. He then undertook a CRTS Communication Engineering Diploma at Melbourne Tech (now RMIT). On completion he joined Trimax Transformers at Coburg and specialised in the design of transformers and associated equipment for the various radios and communication systems.

Early in 1956 Bill took up an appointment as a Telecommunications Engineer in the PMG Department (now Telstra). He served there for more than 30 years in the central Office Long Line Equipment section. Bill was closely involved in the Laboratory's investigation and design of all types of line transmission equipment including

coaxial cable systems and video transmission equipment used throughout the whole of the Australian network.

Over the years Bill became a very keen stamp collector and his collection was so prized and highly valued that a person broke into his home in North Balwyn and stole the lot. Although not covered by insurance, Bill took the loss with a great deal of calm and just said, "its gone, lets go on to other things."

He had an interest in organs, choirs and music in general. Electronic organs became a hobby and he built his own, including one in a very handsome timber cabinet. A large crowd attended Bill's funeral service including a number of his Victorian Radar Association's colleagues. He had always been a keen member of the Association and we will miss him at our functions. We extend our deepest sympathy to Joy and to his son and daughter.

Bill and I shared a tent at 29RS Port Moresby in late 1942 and early 1943. We also worked together at the PMG.

Keith Tudball

Robert Thomas McDonnell

Born 8/1/1923, died 31/5/2004

Bob McDonnell was essentially a GCI man, whose career took him to 132 Knuckeys, 154 Truscott and 150 Adelaide River. He 'formed up' with 132 in the early days of big Crossleys as part of 'Capstan', when the Spitfires first arrived in Australia. He travelled to Darwin with the gear in Wanaka and was part of the team that countered most of the raids on Darwin. His favoured position was the range/height tube of the COL/GCI. South in 1944, he enjoyed a few months of R & R at Cape Otway, during which he married Babs, his No 1 WAAAF, before he was off to NWA again, this time to 154 at Truscott and 150 at Adelaide River.

From 1988 onwards, Bob received much pleasure from the history

and reunions of radar, and he and Babs were able to return to Darwin in 1992 during the 50-year commemorations, and they were able to include Knuckeys and Adelaide River in their travels. Our deepest sympathy is extended to Babs and their family Morrie Fenton (Truscott tent-

William Alex James Jackson

mate)

Born 3/6/1923, died 20/12/2003 Bill was born in NZ and came to Australia when quite young, He enlisted as a radar operator in March 1943. Having completed No 84 RDF Operators' course, he was posted to 334RS, then being formed.

In early October, he flew with the unit to Port Moresby. Several weeks later the unit was deployed to Gusap in the Ramu Valley and became operational there around the end of November. In July 1944, the unit was moved to Cape Gloucester in New Britain.

Bill was discharged in March 1946 after which he trained and practised as an accountant and tax agent. He married Dora in 1955 and lived and practised in Berri, SA until his death. He was active in community affairs in the district.. Our sympathy goes to Dora and their family.

John Patrick Quane
Born 4/2/1915, died 6 Dec 2003
Arthur Manning
Died 25/10/03

Oswald Villard Jr

Born 17/9/1916, died 7/1/2004 Dr Oswald Garrison Villard Jr was a pioneer in the development of radar equipment able to see over the horizon.

An electronics engineer, he turned his youthful interest in radio into advanced research with military and other uses.

His greatest contribution was leading research that vastly expanded the range of highfrequency radar signals by bouncing them off the ionosphere, an electrically charged layer about 80km above the Earth's surface. The result was that radar could peer around the Earth's curve to detect aircraft and missiles thousands of kilometres away. In other work, he developed stealth technology to stop radar from bouncing back from aircraft, so planes are nearly invisible to it.

During World War II, at the radio research laboratory at Harvard, Dr Villard worked on pioneering studies of radar jamming.

He returned to Stanford after the war and in 1947 designed a simplified voice transmitter permitting two-way communication on a single radio channel, like a telephone conversation. In the 1980s, Dr Villard designed an inconspicuous antenna that could wipe out signals that jammed communications, allowing people in many countries to receive Voice of America radio programs.

Dr Villard was a professor at Stanford University for five decades. In 1969, when Stanford ceased all classified work in response to anti-war protests, he moved his research group to Stanford Research Institute in California. Dr Villard wrote more than 60 technical papers and held six patents.

Among his many honours was the Secretary of Defence Medal for outstanding public service, the highest civilian award given by the US Department of Defence.

Peter Graham Smith

Born 22/2/1953, died 21/4/2004
It is ironic, and infinitely sad that Pete's name should appear so soon in the column he initiated to pay tribute to members of an older generation as, inevitably, they 'dropped off the twig'. Shock and disbelief have washed through the WW2 radar fraternity, to say nothing of that later generation with whom he served with such distinction and friendliness. Here

are two tributes, one from each of these groups.

From Ed Simmonds:

Pete Smith's demise was probably one of the biggest shocks that I have had in my lifetime. There is no justice. We have lost a valuable friend in his prime at only 51 years old whereas there are a lot of us, in our 80s, who are still surviving. Pete was to me a very special person who took over the recording of radar history. He took the collected letters and information and sorted it into radar stations and units before sending it to the RAAF Museum at Point Cook, Vic. I will support any movement to name this the 'Pete Smith Collection'.

His knowledge of radar exceeded anyone else's. Fortunately nothing that he had on his computer has been lost. One of his friends has put it all on to CDs for us to digest. I used to ring Pete every Saturday morning at 8.15 to compare recently gathered information. Now I get a lump in my throat when I think of that frequent contact. Yet I smile at the recollection that he told me that I had not warned him that chasing radar history is an addictive pastime.

The marvellous support he gave me in supplying data and statistics for the last work on WW2 called, Technicalities and Generalities, will never be forgotten. Ed Simmonds

From Tony Reading (friend and former RAAF colleague):

Peter Graham Smith (Pete) died suddenly at his home in Bellbowrie, Brisbane, on 21 April 2004.He was 51 years of age at the time of his death.

Pete was born in Toowoomba where he lived with his parents until he joined the RAAF as a cadet aged 17 years. Unfortunately for Pete during his training he was found to be colour blind (albeit defective safe) and therefore unable to realise his dream of flying. He chose what he thought to be the next best thing and

became a fighter controller in the Air Defence branch. It was a career decision that he never regretted. Pete rose to the rank of Wing Commander and during his 27 years in the RAAF he served with distinction as CO of 3CRU and 114MCRU. He was a very popular CO and injected great pride, professionalism and energy into those who served with him. He did this at a time of great change not only in his Branch but also in the RAAF as a whole. In the formative years of his RAAF career Pete was heavily involved with computer programming and it was an area in which he particularly excelled. In other words he became a 'computer nerd' as well as a 'scope dope'. Pete eventually rose to 'head computer nerd' when, as a Squadron Leader, he commanded the RAAF's Software Development Unit (RAAFSDU). As a junior officer he was also a highly respected instructor and it was this skill that he successfully exploited in 'Civvy Street' when he left the Air Force late in 1997. It was during his first posting to Amberley that Pete met and married his wife of 29 years, Corinne.

As a staff officer in Canberra and with three years hands-on experience at DSTO in Adelaide he played a pivotal role in the introduction and ultimate success of Jindalee, the over-the-horizon radar. Pete was also a passionate supporter of AWACS technology, the 'flying Air Defence systems'. Project Wedgetail is now becoming reality with a reformed 2 Squadron being equipped with 'flying radar sensors' over the next few years. Pete was immensely proud of the fact that the first CO of the new 2 Squadron is an Air Defence Officer.

The Peter we all knew was a passionate man with an amazing sense of history. He was without a doubt one of Australia's leading military historians. His specialty, of course, was all things radar. Pete really cared about the people involved with this slice of history

and he relished the endless hours he spent on the phone talking radar to other like-minded radar nuts. It is terribly sad that he never got to finish the historical projects in which he was so deeply involved. Pete was also a wonderful human being. He was modest, generous, clever, and a hell of a lot of fun. We will all miss him and his infectious smile, his red hair and the familiar silhouette on Anzac day. May his legacy to radar bear fruit generously.

Tony Reading

For my part, I can only say that the various reunions that my RAAF Radar Veterans colleagues and I have organised in recent years would not have got off the ground without Pete's support and practical help. We would not have been able to make contact with those who might be interested without *Radar Returns*. My gratitude for this facility has prompted me to offer to act as Editor pending a more satisfactory and lasting arrangement.

Beyond that, the social cohesion which has redeveloped amongst us is very largely an outcome of Pete's energy and self-sacrifice in establishing and maintaining the publication of Radar Returns. His understanding of the wartime history of radar, especially of ground radar, and its social implications for those who served on units around Australia and overseas was remarkable. With almost incredible diligence, he has rescued documents, photographs and other memorabilia relating to that history and worked with Ed Simmonds. Morrie Fenton, Norm Smith and others to provide the basis for the considerable collection now held in the RAAF Museum at Point Cook and invaluable support for many of the publications of these and other authors. It seems to me to be eminently fair and reasonable that Ed Simmonds' suggestion should be taken up so that the Point Cook collection becomes

known officially as the 'Pete Smith Collection'

His work in this connection was, of course, by no means complete when it was cut so tragically short. It behoves all of us who are left to stir ourselves to make sure that our memories of the time and any documentation and artefacts of wartime radar that we may have are preserved and brought together in the same collection while we are still here to do something about it. Like Pete, we are, unfortunately, not immortal.

Despite the generational difference, Pete was closely associated with and highly regarded by the still substantial community of WW2 veterans. At the time of his death, he was President of the Queensland Radar Branch of the RAAF Association, having earlier been Vice-President of the NSW Radar Air Defence Branch. He will be greatly missed, not only by Corinne, to whom we extend our deepest sympathy, but also by all of us with radar connections. Editor

REUNION IN 2005?

Following the disappointment over the proposed Darwin reunion and in response to a number of calls, a working party of the RAAF Radar Veterans group is attempting to organise another reunion, probably to be held in the week beginning 2 May, 2005, this time in Victoria and probably in Geelong.

Geelong has many advantages as a venue for what very well may be the last of this series of RAAF Radar Veterans reunions. Being only 72 km from Melbourne, it would enable members of the working party to be closely involved in the detailed organisation, something that was not possible for any of the previous reunions. It is Victoria's largest provincial city (population about 190,000), on the sea front and close to a variety of natural and cultural features. It has major rail and bus links to Melbourne and is easily reached from Avalon, the terminus for the new Oantas JetStar cut-price airline.

Among the possible activities could be a trip to the RAAF Museum at Point Cook and the Werribee area, easily accessible from Geelong. Another outing could be to Ballarat to see the Australian Ex-Prisoners of War Memorial and some of the many attractions of that district. And the environs of Geelong itself offer many features of great interest.

However, accommodation has presented some problems. If satisfactory arrangements can be made, details will be given in a Newsletter to be issued as soon as possible. In the meantime, we are negotiating with providers for best prices and for locations that will be comfortable, encourage socialising and conserve bus pick-up time.

We are hoping that we will not need to consider an alternative location in our efforts to find a fully satisfactory venue for what could very well be the last on this series of reunions. When we solve these problems, we shall make a mailing of *Registration of Interest* forms as promptly as possible. Please let me know ASAP if you would like us to send you a copy.

Warren Mann, Convener, Working Party on a 2005 Reunion. 39 Crisp St, Hampton, Vic 3188, Phone 03 9598 2193

DARWIN RADAR MEMORIAL PLAQUE

The unveiling and dedication of this plaque took place on Thursday 3rd June. The plaque is mounted on the Memorial Wall, in the area of the Darwin Cenotaph. Originally planned as a simple ceremony, with perhaps twelve radar veterans, local interest was such that it became a major activity. Requests for invitations to the

Requests for invitations to the ceremony were received from 114 MCRU and 321 Combat Support Squadron. There is an historic connection between 114 MCRU and RAAF radar. This unit was formed in 1943 as 14 Mobile Fighter Sector. Whilst operational at Goodenough Island, Kiriwina

12 Squadron to be placed at the

a prayer, for all members of 12

Squadron and radar stations.

Austin Asche spoke of his

Chaplain James Cox then led us in

Darwin Cenotaph.

and Los Negros, it was re-named 114 MFCU in 1944 and was the unit to which most radars in the SWPA reported. We were delighted to accept an offer from the CO of 114 to provide an Honour Guard for the occasion.



Some distinguished participants

In addition, requests were received from OC Northern Command, OC 396 Combat Support Wing and OC 322 Combat Support Wing.

The Administrator (NT), the Chief Minister, the Lord Mayor and the Presidents of the RSL (Sth Aust. and NT) and RAAFA (NT) all accepted invitations. The Hon. Austin Asche AC QC, a radar veteran and past Administrator (NT) was also present.

Coincidentally, a commemorative plaque for 12 Squadron, provided by Air Vice Marshall (ret) Sam Jordan AO, had been placed alongside the radar plaque. This squadron was the first to be permanently based in Darwin in 1939. When it became apparent that no member of 12 Squadron could be present, we readily agreed that the two plaques should be unveiled in a composite ceremony.

Alex Culvenor, President of the Victorian RAAF Radar Association, spoke of the conditions experienced on most radar stations in the North-Western Area.

AVM Jordan, though not a member of 12 Squadron, explained that he had made a deathbed promise to his friend Group Captain John Gerber OBE, AFC, for a commemorative plaque for then called for the unveiling of the plaques. Alan Ferguson and John Howell unveiled our plaque whilst the 12 Squadron plaque was unveiled by Sam Jordan. Many dignitaries placed floral tributes. Alex Culvenor and Stan Middleton placed one on our behalf.

Ray Chin OAM, President of RSL Darwin Sub Branch, recited the 'Ode' and WO2 Geoff Carter played the Last Post.

A memorable day was rounded off by a BBQ arranged for us by Austin Asche at the Aviation Museum, almost under the giant B52 aircraft that is the central feature of the museum.

CAPE DON, 1995

It would have been ungrateful to refuse! Without my knowledge, my youngest son had made all the arrangements for a trip to Cape Don, the site of my WWII service. He had booked the flights to Darwin; including the charter flight to the Cape; arranged all the required permits and obtained permission from the traditional owners.

So, in July 1995, after an absence of 51 years, I was on a return visit,

with my son, to the site of 46RS Cape Don.

Many people think that Darwin is the northernmost point of Australia's west coast. However, Cape Don, on the tip of the Coburg Peninsular, about an hour's flying time in a small aircraft north of Darwin, has that distinction. During the war, this location served as an early warning outpost for Darwin and the Northern Territory.

My first surprise was that we could fly direct to Cape Don and land on a rough dirt airstrip. Nothing like this existed in 1944, though it would have been very useful. Access to the area then was via the sea and a crude landing jetty that carried the foreboding sign "Abandon hope all ye who enter here." During my nine months' service in the area I came to fully appreciate that message.

Our flight from Darwin was by Watt Air flown by Peter Watten. With us was a refrigerator mechanic going to Bathurst (Tiwi) Island to repair machinery. Our first sighting of Cape Don from the air was the tall lighthouse (now automated) that dominates the landscape. After landing on the rough, narrow airstrip the mechanic commented dryly "Fluked another one, eh, Peter!"

The three lighthouse cottages were still intact and other remnants of 51 years ago were also rediscovered, including the narrow rail line and hand trolley that carried supplies up from the jetty. Lincoln Wilson, the resident Ranger, was most interested in my discoveries and their long-forgotten purpose.

The late 'Big Bill' Neidjie OAM, known as 'Mr Kakadu', an aboriginal companion at Cape Don in 1944, had intended to accompany us to relive our friendship of those days. However, illness had prevented him from meeting us but we later we were able to visit him at Jabiru where he and his family extended hospitality to us in great measure.

We met several aborigines, the children and grandchildren of those we worked so closely with 51 years before. The crocodile stories I had told my son over the years were validated by close encounters with several monsters and there was a close-up sighting of a dugong or 'sea cow'.

My son took a number of photographs while at 'The Don'. Any interested airmen who served in the area may view them by calling me on (02) 9427 2356.

Thanks, son!

Kevin Lynch [NSW]

HORN ISLAND 1941-42

The mention of Horn Island in the last edition of *Radar Returns* has stirred me to write about the wartime history of the RAAF on the island.

Early in 1942 it became a RAAF Advanced Operational Base for 24 Squadron Hudsons and later US Flying Fortress bombers flew out on recco and bombing attacks on Japanese bases to the north. There were 7 air raids from 14 March to 30 July 1942.

I was one of three W/T operators, fresh from an eight-month course in Melbourne, who landed on the island on 8 December 1941, the day after Pearl Harbour, to set up Morse-code communication.

The government had shown foresight in laying down airstrips, mostly tarred, all across the north in likely positions on the mainland and islands.

They must have expected Horn Island would play an important role in the defence of Australia from its location on the northern tip. At Horn Island, Port Moresby and Garbutt, Townsville, they put down the longest strips believed capable of getting airborne the heaviest laden bombers.

However, sadly, not quite. At dawn one morning two American Flying Fortresses on take off found the length inadequate because of an overload of fuel and bombs combined with conditions of no wind and the downdraft of a mass of mangroves at the waters edge. Instead of rising off they went into the sea. There was a tragic loss of life.

There were two other men based on the island when we arrived. The main duty of one bloke was caring for the camouflage of bombs and 44-gallon drums of petrol. These drums had to be rolled out to refuel visiting aircraft.

The other bloke was a messman and I suppose his main job was opening tins of tucker and occasionally going over to Thursday Island on a scrounging mission for fresher supplies.

At the eastern end of the main strip were two buildings - a small hangar and a kind of mess building. At one end of the latter a small area was partitioned off to be our signals office. A receiver and Morse key were already there on a table. Half way along the strip to one side was our transmitter shack fully installed. All these buildings unfortunately were perfectly located for an enemy aircraft strafing run as happened in our first raid on 14 March 1942.

Shortly after we arrived two WEM's (wireless electrical mechanics) came to start up the transmitters and we were soon operative on an important watch with Townsville, Moresby and Tulagi.

A section of 32 Squadron Hudson bombers from Moresby landed to start operations. The 'word' was our dispersal bays provided better protection for the Hudsons. An officer arrived with them to take charge of the base. We were never informed of his expertise but considered he was a cipher officer. He took over our signals office for his own use and had a tent erected for us at the western end of the building near the edge of the tarmac. Nobody realised how exposed the position was to an air raid.

In that first air raid we were lucky to have 9 Kittyhawk fighters of US No 49 Fighter Group there, temporarily on a training flight. They surprised the Japs, shooting down two Zeros and a bomber.

There was heroism in the dogfights. One American pilot, after accounting for one Zero, dived on the tail of another one going in for the kill on his CO's Kittyhawk. At the last moment his guns jammed. Undaunted, he sliced one wing through the canopy of the Zero diverting it away from the CO's Kittyhawk to crash out of control. He had great trouble flying his aircraft because an end piece of one wing had been sheered off, throwing it off balance. About to parachute out he persevered and found he could still keep control, so flew south to get away from it all as they had been instructed to do if they were in trouble. There was an RAAF base down the Queensland coast at Coen where they had been flying to on exercises. With difficulty he arrived there and made a hazardous landing.

A mate of mine was stationed there in charge of the W/T section. After watching the landing he came down to meet the pilot. He told me he saw the jagged wing and the pilot looked very shaken. He said, "I've just killed a Jap."

As well as this damaged aircraft, another pilot got lost over the Gulf of Carpentaria, ran out of fuel and bailed out, swam ashore, was taken by natives to a mission station and later flown to Darwin.

There was confusion over the ETA of the Japs. While the dogfights were on the bombers got through and hearing aircraft high overhead we thought it was our Kittyhawks and that we were safe.

Three of us were in the tent and I had headphones on actually taking a message when a sound like all hell let loose shook the tent and us. Staggering towards the tent flap we had just enough left in us to

start running the right way towards the bush. Behind us we could hear the increasing whine of a Zero coming down on a strafing run. I reached the trees and heard a bloke calling "Over here". I jumped for the trench and made it. A mate running at my side crashed into the wire netting of a chook pen, throwing him to his back where he stayed while the strafing passed by him. The next day the army dug out an unexploded daisy cutter close to our tent.

The dispersal bays on Horn Island protected the Hudsons, except one, but bombs left craters on the strips. Our buildings were badly holed from the strafing.

The American pilots were not yet fully trained on Kittyhawks, but, despite lack of experience, had performed heroically..

That raid was the only time we had suitable aircraft on the base to offer any defence to an air raid. The RAAF Radar on Hammond Island was a big help to us when they had IFF installed later in 1942. Before then they would give us a sighting and a course of an incoming aircraft. To assist in identification we had a laid down approach course to come in on. This worked for the RAAF but US pilots, either through not being informed or neglect, sometimes came in on a course of their own choosing. The siren would blow and we would run to a trench, stand up and wait. At times we saw an aircraft limp in with holes in it, lucky to make it on any course! The defence by the US Kittyhawks on Horn Island was the first successful action against the Zeros in the New Guinea area and I consider there should be more recognition of it and of the RAAF who served there.

RAAF Squadrons 32 and 6 (Hudsons) were based on the island and carried out many recco and bombing raids on Japanese bases in New Guinea during 1942. US Flying Fortresses came up from bases in Queensland, refuelling for a dawn take-off.

Also RAAF 75 Squadron
Kittyhawks were there from
Milne Bay in late 1942 for a short
time. At Milne Bay they had
combined with the army to inflict
the first defeat of the war on a
Japanese invasion force.

In later years I telephoned the son of the US Kittyhawks CO in the US. He told me his father was married with 2 children when he left for the war and the pilot who saved him knew this. His father never forgot the debt he owed to the man who had risked his life for him. He referred to a family of 11 children but I am not sure whether he meant he and his wife had achieved this or it was his parents when his father came home.

Vanessa and her husband Liberty have done a great job by gathering in some of the relics left there in to a museum and are doing their best to publicise the Island.

Jack Woodward

7 RS CELEBRATES AGAIN

Some forty friends greatly enjoyed the 16th. Reunion of 7 Radar, Wedge Island, and we were delighted to have again the Wedge 'civvies' Edna and daughter, Kay, join us for the celebration. The Mitchell Room at the Marion Hotel was the venue, and we were able to arrange the jig room in 'O' fashion so that all faced the top table where Jack Measday presided as our CO again. John Beiers was our benign chairman and besides the fresh and interesting displays, he was able to call on Gordon Ellis to demonstrate a night of entertainment out on a lonely island radar station the entertainment being an old portable gramophone and a war-time Andrews Sisters record or two.

The hotel looked after us in first-class style with excellent food and service, and did not object to our bringing a large cake for our 61st birthday, the cake being decorated with a golden model Doover which scanned the tables in realistic fashion.

Then Surprise! Surprise! Ed Simmonds appeared - on the video screen - where he received a warm welcome and told us about Radar history,

A very happy reunion....and you've guessed it - it'll be on again next year.

PERSONAL NOTICES

A History of Fighter Sectors

Norm Smith and Ed Simmonds would like to complete Pete Smith's work on the history of Fighter Sectors and expect to get his info on the topic in the near future. If anyone has any items of interest about FSs, MFCUs or ADHQs, please send details to Ed Simmonds, 349 Ocean Drive, West Haven, NSW 2443;

Email: edsimm@optusnet.com.au

Phone: 02 6559 7847.

303RS Tufi, New Guinea

Jack Roper is looking for anybody who served on this unit when he was there, Dec 42 to June 43. He went back to Milne Bay after that. Please call (03) 9799 3614 between 7 & 8pm.

Walter James Meriton

My name is Pennie Jursa and I am the daughter of Walter James Meriton who served in the RAAF as a Radar Technician between 1961 and 1970. His postings consisted of Laverton Vic, Perth WA and Townsville Old. My father has recently passed away and I am hoping to make contact with anyone who may have served with him. I would really appreciate it if anyone who remembers him could contact me via email at terrypennie@dodo.com.au or by phone on (03) 9775 5282.

RADAR DEVELOPMENTS

Several government media releases in recent months have revealed some interesting developments in RAAF radar:

A New Radar System

RAAF Williamtown recently had a special visitor, and reached a significant milestone in a major defence project in the process.

In February 2004, members of No 41 Wing, Surveillance and Control Group (SCG), air defence specialists, welcomed Australia's first TPS-77 Radar. The radar has just undergone extensive systems testing at Bandiana in Victoria, before being relocated to Williamtown for parallel evaluation in a realistic operational environment.

The TPS-77 is part of Project Air 5375 which was set up in 1998 to develop and build four operational Transportable Air Defence Radar Systems (TADRS) and integrate them into the RAAF's Air Defence Ground Environment. They will replace three existing TPS-43 radars.

The TADRS design is based on a Lockheed Martin primary surveillance radar and data processing system. Ratheon Systems has supplied the secondary surveillance radar, with ancillary components including cabins, and communication systems supplied by Tenix Defence Systems. The project includes a fleet of trucks to transport the complete system.

The TPS-77 is a smaller, transportable version of the FPS-177 air defence radar used by a number of nations including Germany, Canada and Singapore, but is larger than the existing analogue-based TPS-43. It uses a planar phased array capable of multiple transmit frequencies, and its digitally processed adaptable 'pencil beam architecture' delivers an improved detection range, regardless of the environmental conditions.

The TPS-77 boasts enhanced signal processing with high track

density and improved electronic counter-measures, as well as electronic radar decoys to counter anti-radiation missiles.

The new radar is guaranteed to improve operational and exercise deployments, as it can be quickly installed, is transportable by C-130 aircraft, and is designed to suit remote operations in Australia's environmental conditions.

The first system is expected to be operational in late 2004.

OTHR to be Enhanced

Australia's border protection agencies will be equipped with an enhanced ability to detect the illegal movement of people and goods with an upgrade of the Jindalee Operational Radar Network (JORN), the Defence Minister announced recently.

The \$62 million upgrade will improve the sensitivity of the operational radars, giving them greater range and the ability to detect smaller aircraft and surface craft It will also ensure that Australia remains a world leader in over-the-horizon radar (OTHR) technology. The program will also support research and development designed to meet emerging national security.

The JORN was activated in May last year, providing wide-area surveillance of air and sea approaches up to 2000km away from Australia's coastline. Since then the network has detected and tracked hundreds of surface vessels and aircraft beyond the horizon along a 15 million square kilometre stretch from Geraldton in Western Australia to Cairns in Queensland. The information provided has been used by other national agencies such as Coastwatch, Customs and Immigration to assist them in the detection and prevention of illegal entry, smuggling and unlicensed fishing.

JORN consists of two radars located in Laverton, WA, and Longreach in Queensland. The radars are controlled from the JORN coordination centre in Salisbury in South Australia. They are operational versions of the Australian-designed Jindalee research and development radar located near Alice Springs in the Northern Territory. The enhancement program will also improve the integration of all three radars to allow a more complete coverage of the surveillance area.

New Home for Wedgetail

Williamtown is the new headquarters for Australia's \$3.27 billion Airborne Early Warning and Control (AEW&C) Wedgetail aircraft and the official home of the Air Force's re-formed No 2 Squadron, who will fly the AEW&C Wedgetail when it becomes operational.

This is the first stage of a \$149 million redevelopment of the RAAF base, which includes hangars and parking areas for the AEW&C Wedgetail and improvements to runways and taxiways.

The Wedgetail is based on Boeing's next generation 737 aircraft, which is being modified to accommodate various sophisticated mission systems and radar. The aircraft will have far more flexibility and capability than other similar platforms in service today.

The AEW&C Wedgetail is named after one of the largest eagles in the world, Australia's wedgetail eagle. The eagle has extremely acute vision, ranges widely in search of prey, protects its territory without compromise and remains aloft for long periods of time.

The first AEW&C Wedgetail aircraft has recently been painted in what will become the re-formed 2 Squadron colours - a red lightning bolt with a floral emblem, the Fleur-de-Lys, on the tail flash; RAAF roundels on the rear fuselage; and the squadron crest and Australian flag on the forward fuselage.

The current schedule has the first Wedgetail flight in Seattle in May and the first two aircraft being officially handed over to the RAAF in November 2006.

New Command and Control System

The government has signed a \$114 million contract with Boeing Australia Limited to deliver a new state-of-the-art air defence command and control system for the Australian Defence Force.

The Vigilare system will enable the ADF to support national surveillance and the air defence of Australia from operations centres RAAF Bases Williamtown and Tindal, consolidating information from various sources to produce a comprehensive picture of the skies above and around Australia.

This will improve response to possible future incursions into Australian airspace by aircraft and also by missiles. It will use information from such sources as the Jindalee Operational Radar Network (JORN), the new Airborne Early Warning and Control aircraft, civil and military microwave radars, fighter and maritime patrol aircraft, Royal Australian Navy ships and intelligence sources.

It will provide high-tech communication facilities so that ADF commanders can control widely dispersed air, sea and ground assets. These facilities will be networked with other ADF and allied surveillance and combat assets. The contract involves integrating and installing high-technology systems and will bring together capabilities developed both overseas and in Australia. Boeing will maintain the Vigilare system in Australia under a five-year contract valued at \$11.4m. Australian industry will be involved in the development, installation, testing, and maintenance phases of the project with the level of Australian participation set at 64%.

The first command and control system is expected to be installed and operational at RAAF Base Tindal by mid-2007.

Surface Radar Trial in Torres Strait

In February, the Federal Government signed two land-use agreements with Torres Strait Islanders that will lead to improved border protection for northern Australia. The Indigenous Land-Use Agreements will permit the Australian Government to set up a trial of high-frequency surface-wave radar, via transmitter and receiver sites on two Torres Strait islands.

The two-to-three year trial begins in August. During this time it will provide 24-hour, wide-area surveillance of aircraft, ships and boats travelling in the Torres Strait and will test the performance of SWR in surveillance as well as the value of its data in the layered national surveillance system.

The \$19 million initiative is jointly funded by Customs and Defence. It will increase the capacity to watch, detect and intercept immigration, quarantine and fisheries offenders; assist with search and rescue operations; and provide early storm warnings.

The 440-metre-long receiver array will be on Dauan Island, in the northern Torres Strait, while the transmitter will be sited on the uninhabited Koey Ngurtai ('Pumpkin') island, which is administered by nearby Badu Island, in the middle of Torres Strait. Torres Strait is a highly strategic area and the radar trial in this region will provide an excellent basis for assessment of this technology.

The voluntary nature of the agreements paves the way for the future management of maritime and land environments in this region. The agreements will provide the local communities with employment opportunities in site preparation, infrastructure development, and as equipment caretakers undertaking routine inspections and minor maintenance. In addition, the Badu traditional owners have consented to the construction of a community building to accommodate a native title office and purchase of a boat for use by both the Badu Island Community and the contractors while working on Pumpkin Island.

Torres Strait is the Customs/ Coastwatch preferred location for

the trial. This site was chosen as it is a major concentration point for small surface vessel traffic and experiences numerous aircraft flights, providing good data quantities for the radar evaluation. Surface-Wave Radar (SWR) has its origins in research into highfrequency radar technology by the Defence Science and Technology Organisation (DSTO). SWR uses over-the-horizon propagation characteristics of short-wave radio signals travelling over seawater. SWR offers the potential to detect marine vessels and aircraft at extended ranges over the horizon, providing continuous surveillance over wide areas and complementing the JORN sky-wave system.

Journal of Australian Naval History

The Naval Historical Society of Australia has decided to launch a Journal of Australian Naval History, with the aim of encouraging the study and discussion of Australian naval history in an academically rigorous environment. The Journal will be published twice annually, with the first edition planned for publication in Sept. 2004. All contributions will be academically refereed before inclusion in the Journal. So far as is possible, the Editorial Board intends that each edition of the Journal will address a selected theme in Australian naval history. These themes could include any topic that has some bearing on the founding, development, growth and experience of the Royal Australian Navy.

Contributions are sought from authors from all backgrounds and walks of life. Formal academic qualifications are <u>not</u> a prerequisite for contributing; articles may be submitted at any time. Guidelines for contributions are available from Mr Ian Pfennigwerth, Journal of Australian Naval History, PO Box 139, Salamander Bay NSW 2317 (Phone/fax: (02) 4981 5551; Email: jpfennigwerth@kooee.com.au

Website: www.navyhistory.org.au)