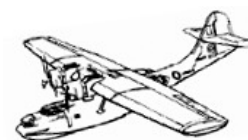


RADAR RETURNS

Signals & Echoes For RAAF Radar Veterans



EDITORIAL

There can be no doubt that six months is a long time between issues of *Radar Returns*, too long perhaps, though I am afraid that it is about all that I can cope with at this stage. One of the effects has been the rather appalling number of 'Faded Echoes' - 26 that I have been notified of. To be expected, I suppose, but there are some sad losses for me among them.

On a more cheerful note, the two principal articles are from authors who are certainly not 'cub reporters': Vic Radford, whose interesting article draws on his memories as an airborne radar officer in WWII, is 87 and Colin Kerr-Grant, recently turned 95, draws on his associations with three pioneers of radar, each significant in his own particular sphere. The memories of younger people with postwar service have been stirred to provide two articles in the *Post-WWII* section, and notes are contributed on aspects of the histories of several important wartime radar units. Most of our readers should find interest in this issue.

Distribution

An interesting trend is developing in the structure of our readership. Not only is the proportion of it coming from those with

postwar service slowly growing, but we are beginning to get requests from descendants, mainly offspring, of WWII veterans. Such people who develop an interest in the history of radar will play an important part in extending awareness of Australia's debt to this element of its defence in WWII and beyond.

In order to save on postage, I am often urged to distribute as many copies as possible by email, and I propose to begin doing so from the next issue, due in March 2008.

In the meantime, I shall be setting up a dedicated Address List, to which names will be added in response to emails asking to be included. I already have a number of email addresses noted, but some of them have been listed for a long time and may very well be obsolete.

So I am asking anyone who can and is happy to accept pdf material by email to confirm this by sending me a brief email from the address to which *Radar Returns* should be sent.

From these returns I shall construct the email Address List. Those who do not so email me will continue to get it by 'snail mail'. My email address is:

whcmann@optusnet.com.au

The Radar Returns Website

As mentioned in the last issue, further work is being done on the website and it will be launched soon. The next stage will include sections ('pages') for:

- News and Notices, to which will be posted significant or useful items of news, notices of forthcoming events, information-wanted notices and other such material which comes to my attention;
- 'Faded Echoes', to which brief notices will be posted, similar to those listed on p. 2 of *Radar Returns*;
- Tributes, to which contributed obituaries will be posted before being included in *Radar Returns*, perhaps in fuller form that is possible there;
- Archives, to act as a repository for articles and longer works of lasting interest or historical significance.

If you have any material that might be suitable for inclusion on any of these 'pages', I shall be delighted to receive it. And, of course, if you have any thoughts

as to what might be included in the future, they would be equally welcomed.

An addressable database of all those people (more than 4000) who, between August 1941 and August 1945, as officers, mechanics or operators, completed radar courses at No 1 Radar School at Richmond, NSW or later at Maryborough, Qld is being prepared, and will be posted on the website quite soon. Initially, the listing will give surnames, initials and the number of the radar course taken, but it is hoped to expand this to include other details which may help in tracing individuals involved in radar in WWII. The groundwork for this project was done some years ago by the late Pete Smith. A good deal of collating, filling of gaps, checking and reformatting has been needed to make it work in this new setting. Any further ideas will, of course, be welcomed.

Contributions

The survival of *Radar Returns* and of the associated website as means of communicating and of stimulating interest in and recording the history of radar in the defence of Australia depends on the quantity and quality of the information and articles sent to me for it. If you haven't already done so (or even if you have and have recalled more as-yet-unrecorded material), please find time to write down your memories and get them to me.

It is worth noting that the Archives page on the website can accept longer articles than can be published in *RR*. We envisage that this section will be a permanent resource on which valuable material will remain indefinitely for reference purposes.

It saves me time if written contributions come in electronic form (email or disk); the next best option is neat typing, but, if neither of those is possible, I certainly do not reject handwritten material.

Financial contributions are, of course, still needed.

Warren Mann, Editor

IN THIS ISSUE

Editorial	1
Faded Echoes	2
Tributes	2-4
Prostate Cancer & DVA	4
Airborne Radar Training & Ops	5-7
Three Pioneers	7-8
A Note on 29RS	9
A Note on 301 & 302RS	9
A Note on 31RS	9
Communications in Wartime	9
State Associations	10
Wedge Island Reunion	10
Post-WWII Radar Returns	
Brookvale, 1955-58	11
Reunion in Malaysia, 2008	11
My Darwin Connection	12
114MCRU in Khandahar	12

The closing date for material for Volume 13, No 1 is 29 February 2008.

Please address correspondence to:

The Editor,
Radar Returns,
39 Crisp Street, HAMPTON, VIC 3188
Phone: 03 9598 2193; Fax: 03 9598 2193
Email: whcmann@optusnet.com.au
Website: www.radarreturns.net.au

FADED ECHOES

The deaths of the following people have come to our notice since the publication of the previous issue. Tributes, where available, follow this listing. If you can provide a tribute or further details on anyone mentioned, please send them to Radar Returns so that their histories may be more fully recorded.

Ronald Ransom Alcock

18/12/1922 - 24/7/2007
Qld; W/Cdr GD; CO 114MCRU
(Served 18/7/1942 - 2/9/1977)

James Harold (Jim) Bettess, OAM

19/12/1925 - 24/2/2007
SA; LAC Rad Op?
155RS, 310RS

Dorothy Madge Harford Bonnefin (nee Wadrop)

9/8/1920 - 4/4/2007
NSW; ACW Cypher Clerk(?)

Briggs, Alexander George, OAM

2/4/1913 - 21/6/2007
Vic; Cpl Rad Mech (RM26G)
320RS

Wallace Eric Lynden Carter

23/9/1921 - 29/5/2006
NSW; F/Lt Rad Mech (RM10G) &
Postwar; 23RS, 321RS, 344RS,
114MCRU, etc; served 28/8/41-30/8/76

Gwendoline Margaret (Gwen) Cole (nee Stuart)

21/4/1924 - 26/3/2007
Vic; ACW Rad Op (ROp41);
15RS, 18RS, 19RS, 1RIMU;
Anzac of the Year, 2000

*George Cracknell

16/12/1924 - 31/3/2007
Vic; LAC Rad Op (ROp69);
33RS, 47RS, 325RS

*John Benjamin Davey

21/3/1924 - 24/3/2007
Qld; LAC Rad Op (ROp87);
16RS, 161RS, 310RS, 319RS, 150RS,
44Wg, 105FCU

*Leo Patrick Doolan

8/12/1924 - 24/7/2007
Vic; LAC Rad Op (ROp68)
16RS, 345RS, 13RS

*Maurice Daniel (Morrie) Egan

22/1/1923 - 25/2/2007
NSW; W/O WOAG (GD); RCM

Wallace Bruce (Wal) Geldard

1/10/1922 - 1/1/2007
NSW; Cpl WOM?

*Roy Gust

14/9/1924 - 21/8/2007
Qld; LAC Rad Op (ROp60)
14RS, 332RS, 335RS, 349RS

John Buckland Hipwell

30/11/1920 - 16/6/2007
Vic; F/O Rad Off (B3, RO19G)
334RS, 40RS, 2RIMU

*Victor John Howell

5/4/1923 - 24/7/2007
SA: LAC Rad Op (ROp63);
44RW, 39RS, 318RS, 324RS, 38RS,
347RS, 336RS
(also, John's companion, Dorothy Davis,
died 27/4/2007)

Frank Hoy

26/4/1924 - 21/1/2007
NSW; Cpl (mustered uncertain)

Mary Edyth James (nee Cowan)

19/3/1914 - 5/9/2007
NSW; Flt/O Officer & Rad Op (ROp31)
15RS, 24RS, 131RS, 134RS

Joclyn Maitland (Lyn) Jocelyne

10/3/1924 - 3/2/2007
Tas; Cpl Rad Op (ROp23)
(also, Lyn's wife, Sylvia, died 5/1/2007)

Willam Arras (Bill) Johnston

26/2/1922 - 25/5/2007
NSW; LAC Rad Op (ROp70)
(Test cricketer)

Frederick William (Fred) Lewis

29/3/1925 - 18/5/2007
NSW; LAC Rad Op (ROp83); 136RS,
322RS, 164RS, 169RS

Ivan Donald Martin

22/6/1926 - 9/9/2004
Vic; LAC Rad Op (ROp113)

*Robert Leslie (Bob) McDonald

27/5/1919 - 11/4/2007
Vic; LAC Rad Mech (RM32G)
151RS

*Kevin Clement (KC/Casey) Noone

19/7/1924 - 18/4/2007
Vic; LAC Rad Op (ROp31)
136RS, 36RS

Noel Prentis

9/6/1923 - 25/3/2007
Qld; F/Sgt Rad Mech (RM10G)
20RS, 25RS, 36RS, 308RS, 355RS

Edward Trevor Robinson, OAM

22/6/1922 - 13/6/2007
Vic; F/Lt Rad Off (B2, RO11G);
47RS, 350RS

*Brian Robert Wardle

19/12/1923 - 24/7/2007
Vic; LAC Rad Op (ROp108);
150RS, 154RS

Joseph Albert (Jim) Wolfe

11/1/1915 - 25/7/2007
Qld; F/O Rad Off (RM29G)

* See tribute below.

TRIBUTES

George Cracknell

George enlisted in RAAF in February 1943 and trained at Richmond in Course 69 as Radar Operator. Posted to 33RS at Bussellton, WA, and shortly after to 47RS at Geraldton he was posted to 325RS early in 1944 at Coronna Downs, near Marble Bar. The doover was on the only hill for miles in the middle of a spinifex desert, a desolate spot.

In December 1944, 325RS reformed at Castlereagh, near Richmond, with other RAAF units, preparing for the North Borneo landings. After disembarking at Labuan on 12th June 1945, 325RS moved on to Sarawak and became operational at Miri on the coast on 6th July.

George was noted for his sporting ability and for the enthusiasm he engendered in the 325 personnel for all sorts of games and pastimes. He made a significant contribution to the morale of the unit. He remained with 325RS until his discharge in February 1946.

George then returned to his job in Australia Post (then the PMG) and had a career that took him to positions of seniority in that service.

Immediately postwar he played for a few seasons in the Victorian Football Association for Camberwell.

In 1953 George married Greta and they stayed lovingly together thereafter. He is survived by Greta, a daughter, three sons and eight grandchildren. To them we extend our deep sympathy.

George Cracknell will be missed greatly, not only by his family but by his many friends and the few survivors of 325RS who have kept in touch.

Don Parncutt

John Davey

John grew up on a family sheep property at Armidale, NSW, that had orchards. On leaving school he joined the Department of Primary Industries (DPI) in Nambour. Enlisting in the RAAF in 1943, he served as a radar operator on 16RS (Gabo Is. Vic), 161RS (Adelaide River NT), 310RS (Exmouth WA), 319RS (Drysdale WA) and 105FCU (Darwin).

After a near-fatal bout with 'malaria' which proved to be pneumonia, John was discharged in December 1945 and resumed his training as a Horticultural Advisor in DPI in Nambour, completing a diploma by cadetship. After 3 years he was appointed as an Inspector and later Manager of the Redlands Experimental Station. He worked in DPI for some 43 years, retiring in 1984 as the District Advisor in Horticulture in south-east Queensland.

TRIBUTES (Cont.)

His family referred to him as 'the plant doctor'; he developed an uncanny skill in recognising plant problems and giving advice to farmers on how to fix problems or reduce their impacts.

He was involved extensively in kiwi fruit and avocado industry development and production, also introducing new varieties of strawberries, paw paws and tomatoes through new pollination techniques. His greatest success was reported as the introduction of "new methods to solve the molybdenum deficiency in acid soils", significantly improving plant yields.

John developed great photography skills as his main hobby and he played the mouth organ at family events. Through his life John was keen on sports. These included boxing (taught by his father), rugby league football (representing Wide Bay in the All Whites), ballroom dancing, grade tennis and cricket, and beach sprinting at the Maroochydore Surf Life Saving Club, where John was club Secretary for 3 years.

John and Barbara were married for 54 years, and with 5 children and 8 grandchildren: he saw the importance of education and community work. They led a well-planned, busy and fulfilling life and enjoyed many activities. John was active in community and charity work in the Redlands area where they had lived since 1950 and a life Fellow of the Lions Club

John was a member of the Radar Ass'n in Brisbane. He took part in the Anzac Day march and he and Barbara enjoyed the social activities of the Association.

John Davey was a gentleman, a lot of fun and a larrikin in a gentle way. He will be sadly missed by his family and friends.

Prepared with help from John's family

Leo Doolan

Born in Ballarat North, Leo was the eldest child of a public servant in the PMG's Department, and was later to follow in his footsteps. The family moved to Ouyen in Northern Victoria and later to Bendigo and Pyramid Hill where Leo left school and started work as a telegraph boy. He became a postman and moved to Melbourne not long after war broke out.

Leo joined the RAAF in January 1943 and trained as a radar operator in Course 68 at Richmond NSW. Being a redhead, his nickname in the RAAF was 'Blue'. After a stint at 16RS at Gabo Island, he served on 345RS in the Admiralties, then for a period at 13RS at Cape Otway. He was discharged in January 1946.

Leo had met Betty, a cousin of a close friend, soon after going to Melbourne, and they were married in April 1947. After some years living in Armadale, and the birth of two sons and a daughter, Leo became Postmaster at Peshurst, later at Beaufort and finally at Castlemaine where he stayed until his retirement in 1978 and lived for the rest of his life.

While Postmaster at Castlemaine Leo oversaw the changeover from the manual exchange to an automatic telephone system. In 1972 he directed the communications operations for the emergency services during the Faraday kidnapping crisis, for which he received a letter of commendation.

Leo's main interests were his garden and carpentry, making many items of furniture, though he played lawn bowls for many years. He was also a member of Rotary, Freemasonry, Probus and the Anglican Men's Society. When he retired he and Betty travelled overseas and later made regular caravan journeys to Queensland during the cold Victorian winters, calling on friends, relatives and old RAAF colleagues on the way.

He loved all his grandchildren and great-grandchildren, was excited when they came to visit, and usually had a treat for them. But he was pleased also when they left as he was a quiet and private person who didn't like the noise of young children.

Leo attended radar reunions at Bendigo (1992), Wagga (1997) and Maroochydore (1999) as well as local radar functions. In later years as his health failed, he spent time collating information on his and Betty's families. He will be greatly missed by his friends as well as by Betty and his family to whom we express our sympathy.

Prepared with help from Alex Culvenor and Leo's daughter, Jennifer Hudson

Morrie Egan

Morrie Egan was one of the earliest RAAF people involved in radar counter-measures (RCM) against the Japanese in the Kavieng – Milne Bay area of NG. Between April and June 1943 he flew five missions around NG as an RCM Operator in Catalinas from 11 and 20 Squadrons based in Cairns and Port Moresby.

Joining the RAAF in November 1941, Morrie trained as a WOAG. He was posted to No 1 RIMU at Croydon where he became involved in RCM, assisting John Fry at the CSIR Radiophysics Lab building receiver sets to detect Japanese radar. He then attended the RAAF's second RCM course at HMAS *Rushcutter* in Sydney with seven other RAAF sergeants in early 1943. The course of about a month was conducted

by Lieutenant Hallett RNVR, who had been sent to Australia in November 1942 to train personnel in the British method of RCM.

The group graduated as trained RCM operators and was sent to Townsville by rail in mid-March, 1943. From there the group was split up with four (including Morrie) going to Catalina squadrons, initially in Cairns, two to No 2 Squadron (Hudsons) at Coomalie Creek, NT, and two to the USAAF (B-24s at Fenton, NT) to fly with USAAF crews. By May 1944, three of the eight had died in action in the SWPA.

Morrie was first attached to 11 Sqdn, then to 20 Sqdn, returning to 11 Sqdn in October 1943 where he stayed until the end of the War. With 11 Sqdn based in Cairns and Darwin, he served mainly as a Wireless Air Gunner (WAG). When war ended he was transferred to 114 Air Search Rescue Flight. He was discharged in June 1946 as a Warrant Officer.

Morrie had two logbooks - the first contains all training and operational flights but not the secret five RCM flights. After those flights he appears to have become a regular WAG crew member in F/Sgt Tregaskis' crew, flying in a variety of Catalina aircraft on mining, strike and convoy missions and evidently did not use his RCM operator skills again. In June-July 1945 he was in a crew that ferried a Catalina from San Diego to Rathmines. For six months after the war, he was a member of a Catalina crew based in Merauke and elsewhere, flying Air Search Rescue missions. He clocked up more than 1,500 hours, mostly on Catalinas, including all RAAF Catalina types.

Morrie died in a nursing home on the NSW Central Coast, having lived in a retirement village in Erina, NSW, since 1997. He is survived by Beryl, his wife of 58 years, his two sons and his sister. To them we extend our sincere sympathy.

Craig Bellamy

Roy Gust

I met Roy when he was posted to 332RS at Lae in NG in Nov 1943. He had been at 14RS Wilson's Promontory and was a most capable op. This was borne out when the unit, having moved to Malahang Airstrip, recorded in its Operations Record Book: "Nov 23, 1943 - 18 Fighter Sector advised plots passed by the Station on enemy aircraft in Finschhafen resulted in successful interception. Sixteen enemy aircraft were destroyed." On Nov 26 a signal was received from 18FS: "Station doing excellent work new location." Roy was the duty operator and, years later, spoke of the size of the 'blips' that he had encountered on the screen!

TRIBUTES (Cont.)

Roy left our unit from Sio, NG in February 1945 and I did not meet him again until he and other former 332 members attended the reunion at Nelson Bay (1995) and, even though in poor health, he still had an incredible long-term memory as well his knack of using humour to brighten things up; Roy's story in Ian McKellar's book on 14RS supports this.

Roy and his wife Edna took part in the reunion at Wagga 97 and, through Roy showing a photo from NG to Jim Coad, and research done by Norm & Athalie Cornish, we staged a memorable 332RS reunion at Nelson Bay in 1999. That was the last time I saw Roy but many phone calls ensured that we kept in touch. He moved to Monto, Qld, several years ago then recently joined his brother in a nursing home in Crows Nest (where he had spent his early years) and seemed content there. Edna was selling their house at Monto, intending to buy a unit in the nursing home grounds; whilst awaiting Edna's arrival for visit, Roy passed away peacefully on 21st August.

George Treadwell

Bob McDonald

Bob was born at Murrumbidgee in Melbourne and grew up into the Great Depression. He gained his Merit certificate at school in Essendon and went to work for an automotive spare parts firm, then joined the Government Ordnance Factory at Maribyrnong and was also in the army reserve. At the outbreak of war in 1939 he tried to join the army, but was refused because he was in a reserved occupation. A change in the regulations in July 1942 allowed him to join the RAAF.

After a wireless mechanic's course in Melbourne, Bob did No 32 Course at Richmond NSW to become a radar mechanic and was posted to 151 Radar Station, then being formed as a mobile GCI unit at Richmond. The unit moved north and eventually arrived at Merauke in Dutch New Guinea around Christmas 1943. Bob stayed there as one of the three radar mechanics until the unit was closed down in March 1945, a long time in what has been described as "a terrible place".

Merauke was no Garden of Eden and many a parody has been written and sung about the doover and most of the time the radar was operated continuously. Transport to the doover was a command car, a large jeep capable of carrying six people.

After the war he returned to his old job with the Department of Defence and later moved into the office at 339 Swanston Street from where he retired in 1977.

Having known Elva for many years Bob finally married her, gaining a ready-made family of two step-daughters. He and Elva were very close and travelled extensively throughout Australia.

Bob loved gardening, growing orchids and other beautiful plants. He also loved football and was a strong Swans supporter from his youth.

Sadly, ten years ago Bob's health began to fail, probably as a result of the terrible times he suffered in New Guinea, and he passed away very peacefully.

Bob was a loyal friend with a good personality and great sense of humour. He is survived by Elva and a large extended family and will be sadly missed by them as well as by all who knew him including the few remaining members of 151RS.

Based on eulogies given by friends from the Sebastopol RSL

John Howell

It is with regret that I notify you that John Howell passed away on 24 July 2007 after a short illness. He was admitted to the Ashford Hospital last April with a heart condition.

John was a radar operator (Course 63) who served 39RS (Port Keats, NT), 318RS (Batchelor, NT), 324RS (Paradise, WAh), 38RS (Bathurst Island), 347RS (Manus Island) and 336RS (Oro Bay, PNG).

In civilian life, John was with FH Faulding until 1942 when he joined the RAAF. He returned to Fauldings after the war as a representative, then joined Glaxo until he retired as State Manager in 1987.

John was a member of Mitcham, SA, RAAFA, AFA Bowling Club and Brownhill Creek/Mitcham Probus. He will be missed by his many friends, especially at the RAAF Signals and Radar luncheons and Anzac Day Marches. He took part in reunions at Nelson Bay (1995 & 2002), Maroochydore (1999), Perth (2001), Adelaide (2003) and Geelong (2005), where he and his companion, Dorothy Davis, made many friends. Sadly, Dorothy also passed away recently.

His wife, Maggie died some years ago, and he is survived by a big family of children, grandchildren and great-grandchildren. To them we express our deep sympathy.

Ray Deane, Secretary, RAAF Signals & Radar Association of SA, (with some details from Editor)

Kevin C Noone

Kevin (or KC/Casey) joined the RAAF as a radar operator from his family home at Pascoe Vale, Vic, on his 18th birthday. His training at Richmond, NSW, was

followed by service at Horn Island and other radar stations in North Qld.

KC was a friendly, outgoing personality with an abiding interest in early jazz music. He delighted in impersonations of jazz celebrities and with performances on his beloved cornet. KC's jazz playing was always impromptu - no-one recognised a complete tune because of his digressions from the general theme. His good-humoured music was usually accompanied by much laughter and raucous interruptions from skeptical audiences. KC was never distracted but played on regardless.

Through his own brand of wisdom and fun, KC added greatly to morale and companionship. For this contribution, his radar colleagues are ever grateful. He made tedious life in isolated areas, bearable.

His widow Pat at Stawell, Vic, eldest daughter Leonie and the others in his large and extended family, and his friends throughout Australia, will sadly miss Kevin and his lovable spirit.

John Patrick McAuley

Bryan Wardle

Bryan Wardle, of Hawthorn, Victoria, died recently aged 83. Bryan was a GCI radar operator and was first posted to 150RS at Adelaide River, and then to 154RS at Truscott in Kimberley country. Both stations had portable English Mk.V COL gear, 150 in Crossley vans, and 154 in large International vans at Truscott.

While at the 154 camp in the Kimberley bush, Bryan was able to pursue his interest in the untouched Kimberley area, also in the way of life of the Drysdale area people who occasionally visited the camp. In *More Radar Yarns*, p. 167, Bryan tells of his excitement when first finding ochre cave paintings of an unusual nature while out on a three-day discovery walk with a couple of 154 friends after the war had ended. Some of his descriptions were filed in the Melbourne University Archives. We extend our sympathy to Margaret, and to David, Robyn, John and Susan.

Morrie Fenton

PROSTATE CANCER & DVA

A request has been received for contacts or information which might help in a submission to the Veterans Review Board being prepared on behalf of the dependant of a radar veteran who died from prostate cancer. If you have any experience or information that could help in these circumstances, please contact me as soon as possible.

*Warren Mann, Editor
(For contact details, see page 1)*

AIRBORNE RADAR - TRAINING AND OPERATIONS

Vic Radford

The late Hal Porter was one of my classmates in the first group of 'Bailey Boys' at Sydney University. In his *Adventures in Radar* (1988) he tells of the experiences (and ingenuity) of those of them who established and operated ground radar stations in remote parts of Australia and the islands. Some of us, however, were assigned to airborne radar and found it to be something of a 'Cinderella', with little support from AFHQ because, in the early days of the war, it was not expected to be used in the defence of Australia.

Those involved with airborne radar had to develop their own methods of dealing with the problems they confronted. Throughout my service I was lucky in having interested and skilled technicians who gave me the chance to do what I liked doing: training air crews to accept and understand the usefulness of radar.

Members of the first Bailey course were all recruited from universities - mostly second or third year Engineering or Science undergraduates - for service ultimately in England. Japan entered the war before the course was finished. I was disillusioned before that, though, as the course was what would now be considered an introduction to basic electronics with some maths and emphasis on 'practical' work: soldering, making an oscilloscope (which kids can now do with a Dick Smith kit) etc. As I have never been dexterous, I did not want to be a 'commissioned mechanic'. Further, we never saw a radar set - only deliberately blurred photos of aerials on English coasts. I doubt even if our instructors had ever seen radar in operation.

Porter's book says that on graduation as P/Os all went to Richmond and even there the training for ground stations was apparently sparse. Those posted to airborne radar went off on their own and, as it transpired, were not likely to meet any of the others again until after the war. I was posted to the RAAF Acceptance Unit at Fisherman's Bend in Melbourne - why me and why there I never found out but it led to a speciality I had to carve out for myself which in retrospect was most satisfying.

In 1942 the Department of Aircraft Production (DAP) in Melbourne and in Sydney were building Beauforts. Looking back and considering Australia's engineering industry before the war, it was a magnificent achievement. Supply and technical difficulties were overcome by enthusiasm, with everyone at every level doing his best. Time was the driving force

as no other aircraft were likely to be available soon enough to stop the Japanese, who by then had reached Indonesia.

It was not until the Beauforts went to the OTU (Operational Training Unit) and operational squadrons that problems developed, arising partly from Australian modifications to the original English design but also due to different flying practices between training and operations.

DAP produced the aircraft without any of the auxiliary equipment - no wireless, no ASV, gun turrets but no guns etc. The installation of these items and making them operational were the responsibility of the RAAF Acceptance Unit after the empty aircraft had been test-flown and passed by the DAP test pilot.

When I arrived I found two eager radio mechanics awaiting my arrival to let them into the secrets of radar, and a crate of ASV sets, some from Healing and some from AWA. Everything was so 'hush-hush' that there was reluctance for anyone other than an officer to be allowed to have a circuit diagram. I had to admit that I had never seen one before so the three of us sat down to combine their practical experience and my theoretical knowledge. My hand sketches showing expected voltages at different points became very useful later when I had to instruct mechanics in squadrons where little training had previously been given and aircraft often returned with the radar not operating.

Once we installed the sets and took off (usually for engine checks) a host of other troubles arose. Vibration loosened cable connectors, aerial fittings became loose etc. But no one in AFHQ, or anywhere else, was able to tell me how to ensure the set was tuned to its maximum efficiency. We could do this on the bench with test instruments but in the air gremlins interfered. Other than saying I should be able to pick up a smallish steel ship at 30/40 miles, or a periscope at 5/7 miles (hard to find around Fisherman's Bend), no real standards were available.

The size, shape, distance, etc of the blip reflected from some fixed object such as a coastline, if logically interpreted, told the crew whether the set was working correctly and, with experience, what a particular blip represented. However, in comparison with ground radar, these blips were often momentary and varied in shape as the aircraft moved or changed course constantly changing the aerials field pattern and thus the strength of the incoming signal. So the level of training required was quite high, but it took a long time to get the RAAF to realise that without such training they had wasted their money.

Even more importantly, some crews were losing confidence in the equipment.

My only contact with AFHQ was my monthly report and probably because I harped so much on how little RAAF personnel knew about how to operate radar, its advantages and limitations etc, I was suddenly posted in mid-1942 to No 7 Squadron which was assembling at BTU (Base Torpedo Unit) at Nowra NSW. Fortunately it was crewed by some of the younger technically minded permanent air force, though I found in my first lecture that most of them had never been told about directional fields patterns from the aerials, believing the signal went out all around like radio signals. They soon appreciated that the sideways field was more effective for searching but, for the short-range work involved when dropping torpedoes, even the weak forward signals were sufficient to establish distance to the target, often difficult to estimate by sight when the size of the target and wave conditions could vary so much.

Our task was to develop the best tactics to attack the small ships of the RAN (Royal Australian Navy) with dummy torpedoes. We soon learnt that to adopt the recommended English practice of three aircraft in low level tight formation meant the navy could concentrate their fire power and that was that. So we tried timed coordinated attacks by single aircraft coming in at sixty degrees with success but were instructed by AFHQ to return to tight formation attacks. Fortunately I never heard of Australian Beauforts having to attack the enemy with torpedoes.

Torpedoes had to be dropped at very low levels to prevent them going in nose first and then straight to the bottom, but if too low they 'skipped' and usually went off course. As a height indicator the radar principle was of no use because of 'grass'. An intelligent radar mechanic who had been a 'ham' produced a radio altimeter using FM. The CO arranged flight tests with this crude mockup and it looked promising. So I told Melbourne what we were doing and was ticked off because no official request had been made, and if one were received it would be handled by Signals and not radar. Further the US Air Force had developed a similar radio altimeter which AFHQ said was not as good as the barometric-based ones we used. I was told to concentrate on the job I was supposed to do. Odd, as no one at AFHQ had ever defined it.

Before I could prepare a reply in language the CO would sign, the Squadron received orders to cease training immediately, load all the live torpedoes,

ammunition and bombs we could, and fly to Townsville with a forward flight to go straight to Horn Island. From there, we flew regular patrols along the south and west coasts of what was then Dutch New Guinea looking for Japanese submarines, which hid in estuaries during the day to charge their batteries. We crossed back and forth across the Arafura Sea, turned east near where Gove is now and back to Horn.

This was a busy time for me as I flew with every crew to ensure they learnt how to interpret the blips and get the best out of their set. It paid off as the squadron became radar-conscious resulting in some sightings and attacks with unconfirmed results. However the day I best remember was 10 December 1942 when, soon after take-off in a new Beaufort (A9 119) piloted by F/Lt Crocker, the port wing caught fire and started to buckle. There was nothing to do but put down in the sea (we were not far from Horn Is). We hit with the tail section first which broke off but effectively reduced the impact speed of the front section - water flowed in everywhere as if we were fifty feet down but suddenly we stopped with a jolt and when the water drained away we were stuck firmly on a reef with sea all around us and Wednesday Island in the distance. No one was hurt so we just waited to be rescued.

Then we were flown to the base at Townsville, for a medical check but we were all OK. We said in view of the 'stress' we had suffered (it had all happened so quickly we did not have time to develop stress) and Xmas so close could we get a few days leave south. The medico agreed and even the CO said there was a Beaufort that was due to go south for a major overhaul. We should have had more sense when we saw the aircraft as it was from our own squadron flown by a pilot with the squadron nickname 'Pranger' because he always tried to drop-land from forty feet up. Anyhow we went. Fifteen minutes in the air the port engine started spluttering and the hydraulics started to fail. Almost miraculously, with bush all around us, one of the emergency airstrips (built for the 'Brisbane Line' defence) appeared straight in front of us. With one wheel down and one half down we skidded along the strip and skewed off, stopping when our good wheel went into a slit trench. We had arrived at Breddon near Charters Towers unharmed. So we went back to the squadron to spend Xmas lunch with them and a few nurses who had been invited by the CO.

By now the ASV units were readily available and becoming more reliable though still not fully tropic-proofed. I was in constant conflict with AFHQ experts who were sending me instructions not to put fans etc inside ASV cabinets. No one left the comfort of Victoria Barracks to see what happens when an aircraft sits on a strip during a cool night, takes off at dawn and within an hour can be flying over New Guinea jungles or close to West Irian ranges with peaks more than twice the height of Mt Kosciuszko.

At Horn Island we established a radar beacon and continued with convoy escorting and submarine searching. The squadron had flown about a million miles without a fatality, though we did have a few incidents. However down south at OTU (East Sale, Victoria) there were many deaths. Crews posted to OTU were demoralised before they arrived. There is on the main highway opposite the Bairnsdale RSL, the Beaufort Memorial Park which records the names of about 270 killed in training in that area. Its erection by the RSL and ex-squadron members was opposed by the RAAF. In the late '60s when I visited, an RSL member told me that East Sale serving personnel were still 'encouraged' not to visit just a few miles down the road. More airmen were killed in training than in the Beaufort squadrons operating against the Japanese.

To stop the killings and improve the morale, G/Capt 'Bull' Garing was brought back from England to take charge. He immediately replaced some of the flying instructors with people from operating squadrons who had faith in Beauforts, having flown them for thousands of miles in hundreds of operations without problems. On the maintenance side as each Beaufort was inspected, two or more ground staff who had signed the EE77 (a check list of work carried out on the aircraft) were selected at random and went up on the first test flight of that aircraft. Soon flying safety improved dramatically.

I was posted in August 1943 from the tropics to East Sale. Garing asked what I needed to train people in radar and to get rid of the 'Jesus Box' bogey (rumours were common that radar waves made you sterile, that the high voltages caused lightning strikes and crashes, and other stories even more bizarre). I was given a 'flying classroom' - a veteran Hudson (Arafura Annie) A16 200 and two interested Hudson pilots. We fitted it up with six ASV sets, plotting tables etc with a curtained 'dark room' but by removing the separate curtains on the portholes one could see the rock, ship, or whatever was causing the

blip on the screen. Bass Strait, with its many islands, rocks and inlets, was ideal for training. On their second training session the pilot would sometimes fly to the Tasmanian coast or some such place. The trainees, using only the maps, their watches, and the screen blips, had to work out where we were and the course we were taking. It worked far better than I had hoped as with the competitive game element they learnt far more than classroom lectures could have achieved.

Beaufort accidents and deaths were still happening (not only at East Sale) so Garing put together a small group, of which I was one, to go over all the incident reports, training comments, engineering schedules, radar engineering reports, etc including numerous EE77s. The object was to give him base facts that could justify real experts - RAAF, civilian, DAP staff etc - coming up with a full report and suggestions. We never heard what happened and were told not to talk about it but we gathered that AFHQ did not want to know nor let anybody else know. The whole thing was to be buried and AFHQ continued to do so until many years later.

Strangely, at that time through an unfortunate accident, one of the main causes of all the killings was revealed (which half the base must have seen and have heard the reason). But AFHQ clamped down and no one was to discuss it - fair enough during the war years but their attitude continued for a long time, possibly still does, but I am now 87.

That afternoon one of my radar-equipped Ansons was waiting until the scheduled 'circuits and bumps' exercises were finished and the strip cleared for general flying. One very experienced and decorated pilot was doing a conversion course to Beauforts. He came in slightly to port, revved up and apparently decided to go around again, climbed to 600-700 feet but suddenly with full power headed straight to the ground. Beauforts normally burnt furiously in that situation but this time there was little smoke - it had dived into a shallow swamp. Ambulances, medicos and fire brigade rushed to the scene. The RAAF medico, when he saw that the dead but hardly externally injured pilot had a pinkish to red skin-colouring, declared it was carbon monoxide poisoning and took the body straight to the base hospital. There he removed several vital organs which should have enabled a pathologist to trace the path, and concentration, of carbon monoxide in his body. Flying was stopped so we taxied back. As our flight was already scheduled I was given a large biscuit tin to take to Melbourne and hand to the Victorian

Government Pathologist. Naturally there was some time lost in typing the medico's report and phoning the Pathologist's office so we were about 40 minutes later than estimated. No one was there but we learnt that they had left ten minutes before we arrived. So I took a taxi to the GPO and after making a fuss was given Victorian Government Pathologist's home number as no one answered at the office. He told me that any delay would not matter and to take the tin to the City Morgue, at that time near Prince's Bridge. I did so but the attendant would take no responsibility for the tin - he handed me some numbered keys; I selected a coffin-sized refrigerated container, closed it and he handed me back the key telling me I would have to come back in the morning to take the tin away. So I dug the Vic Gov't Pathologist out of bed and told him he or a representative would have to be there by 6am, which happened. I phoned the CO's office before breakfast so he would know the full story.

In March '44, I was posted to a Wireless Air Gunners School at Maryborough, Qld, which was pretty dull as 90% of the training was in classrooms. They allotted an old Anson as a flying classroom but with the numbers passing through they got a poor introduction to ASV. The one highlight for me was that I started an Air Gunnery course but before finishing was posted to 20 Squadron (Catalinas) at Darwin where I completed the training mainly because the CO said that in an emergency an extra gunner would be more use than a 'boffin.'

The Catalina crews were familiar with ASV because about the time I went to Beauforts another member of our course, F/O Stan Deakin, who was the first radar officer to be posted to a squadron, was sent to 20 Squadron and trained them well. On 8 March 1943, whilst on operations with S/Ldr Chapman, the crew and F/O Deakin disappeared off Gasmata (New Britain) and, despite searches by other Catalinas, no trace was ever found.

The new aircraft coming from USA were fitted with the most advanced radar equipment (ASD) which few had seen. It was 3cm wavelength, with magnetrons, waveguides, the lot. They were almost 100% reliable, had spares that were never needed, and were excellent for mine and bomb-dropping, the squadron's main task around the Indonesian islands. About this time LORAN (long-range navigation) was installed and an aircraft could plot its position to within 500 yards anywhere in the Pacific/Indian Oceans. The two units greatly improved the accuracy with which later we could locate and mine small inlets,

channels etc. along the China coast from Hainan Straits to Amoy (opposite Taiwan).

General Douglas McArthur landed back at Leyte Gulf in late 1944. Jinamoc Island opposite the landing site was selected by the US Navy as a base for the Australian Catalinas. When we arrived about ten days later at Jinamoc it was chaotic. But soon the US Navy construction battalions (Seabees) flattened land to service the aircraft, put up workshops and Quonset huts and within weeks we had a laundry service and ice-cream machines. The RAAF just sat back in wonder. Despite all this marvellous organisation we soon learnt that the US Navy frequencies were such that aircraft transmitters could not contact the Army even in an emergency nor they us, though the US Army bases were in sight over the water.

By February the full Catalina Wing, 76 Wing, consisting of 11, 20 & 43 squadrons (I was then Wing Radar Officer) was carrying out regular mine-laying operations along the China coast. The Japanese were trying to keep supplies up to their troops and ran ships close to the China coast. If they ventured beyond the shallower coastal shelf, the US Navy submarines, which by that time had complete control of open waters, were waiting for them but the subs could not risk going into the shallower regions. So it was decided to use the RAAF to lay mines in channels and ports through which the Japanese vessels had to pass. The US did not have aircraft or crews capable and experienced in laying mines so far from base or the added advantage of the Catalinas' slow speed allowing the mines to be placed with the great accuracy that was essential.

Minelaying required careful planning. Amazingly we had detailed hydrographic charts from the Royal Navy of all the main Chinese ports prepared originally about 1906 when the RN was asked to do so by the then Chinese Government. Once it was decided exactly where the mines were to be placed, a nearby land feature was selected as a 'datum' from which bearings and distances (converted to 'flying seconds' to the mine-drop position) were calculated and plotted. The datum could be a small cape or any reasonable feature that could be recognised with a little moonlight.

The Loran would confirm that the aircraft was, say, 5 miles from the datum area. If the topography allowed, one could align the aircraft on the same bearing that it was proposed to fly after passing over the datum which helped the pilot to concentrate on the planned height and speed. Usually the observer counted up the seconds past the datum and at the

prearranged number the second pilot dropped the mine. Not all pilots were prepared to put faith in their Loran radar operators to give them such advice but, towards the end of the war, their numbers were growing, particularly when visibility was poor.

By mid-1944 the Japanese Air Force never troubled us though one night over Amoy we saw both visually and on the radar what we assumed to be a night fighter. However, we were probably wrong because he seemed to want to avoid us as we did him. The main danger when flying so low was the risk of hitting a mountain. In north Hainan we believe one of our aircraft did so.

Catalinas dropped mines at Hainan Straits, the Pescadores (between Formosa and mainland China), Hong Kong, Amoy, Swatow and other ports. Whilst we were laying mines at Hong Kong on VE night we listened to the BBC celebrations - it just did not seem fair somehow.

I stayed with the Wing until well after VJ day. G/Cpt Stuart Campbell selected crews to fly the prisoners of war from Changi who had to be hospitalised quickly. My task during those trips had little to do with radar - just to assist those men through their long hours on the way home.

I knew then that RAAF radar had been a picnic.

THREE PIONEERS

Colin Kerr-Grant

Sir Mark Oliphant was a research student and graduate of the University of Adelaide where my father was Professor of Physics, having succeeded Sir William Bragg of X-ray fame. As a research student, Oliphant had worked as a 'demonstrator' in charge of Physics practical classes. His brother, Harry, was in charge of the Department workshop. Both Oliphants were expert at glassblowing, making vacuum-tight apparatus for experimental work in particle physics. In 1927 Mark Oliphant won an 1851 Scholarship to England.

He went to Cambridge to work on particle physics under Sir Ernest (later Lord) Rutherford, head of the Cavendish Laboratory, later becoming his research assistant. While there he had a high-tension shock of minute amperage which knocked him to the floor and, apparently as a result, his hair turned white, so he got the nickname of the 'White Oliphant'. In 1937 he became Professor at Birmingham University. In his research team, J T Randall and H A H Boot were developing the magnetron, which was capable of ultra-short-wavelength oscillations (a few centimetres). Much of the work on nuclear

physics was done by two other scientists working in Oliphant's laboratory. Rudolf Peierls and his Russian-born wife who Rudolf had met at a conference in Moscow. They were foreign nationals, so they were not allowed to take part in the secret research which produced the magnetron, but were able to study the amount of uranium 235 necessary to produce an atomic explosion. Oliphant told me that Peierls was almost certainly the first person to calculate the critical mass of U_{235} . His father was Chief Engineer of AEG in Berlin and valuable to Germany's war effort, so tolerated by the Nazis. Though the son was a young research scientist of some note, the family was Jewish, he was advised to go to England in 1939.

In 1943, Oliphant went with others to USA to advise on the development and use of radar in England, finding them quite unprepared for it. Soon, however, they began to order radar sets from commercial radio producers and thus the secrecy of radar was lost. However, the US insisted on secrecy for the processes used, rather than the principles of, the making of an atomic bomb.

Oliphant came out to Australia on a short leave from Birmingham in 1944. I happened also to be home on leave from No 1 RIMU. As neither of us knew that the other was involved with radar, we never mentioned it to each other. But Oliphant was full of other ideas for the future, more pragmatic than those of Piddington. For example, he suggested building a tall metal tower on the highest peak in Central Australia to catch the frequent clouds there and bring some rain to the desert part of Australia. After some rough calculations he came to the conclusion that the amount of rain likely to be produced would not justify the expense. However, the production of oil and gas in Central Australia and the pollution and smoke particles produced from the fuel used to pump the products interstate seems now to have improved rainfall in Central Australia, thus serving Oliphant's original purpose.

Dr Jack Piddington was a classical science researcher of the highest order. His first task after Pearl Harbor was to modify the circuitry of the six Shore Defence (ShD) sets received earlier from Britain, extending their range from 10-15 nautical miles to about 100 km by increasing the pulse length and decreasing the pulse repetition frequency. He did this with less than five days of intense work on the circuit. Subsequently he was involved in the design of the radar sets to be produced by the Gramophone Company (HMV),

their modification and stabilisation for use with field power supplies, and the development of radar equipment, especially improved transmitter valves. With the advent of the magnetron, and the need to build sets to fit into aircraft, he and a small team were active throughout the war. After the war, Piddington, the 'true' scientist, turned to astrophysics, the relative movement of nebulae and he indicated where he thought the centre of our galaxy, the Milky Way was. He was also a keen tennis player, playing at weekends in a local team.

There is an excellent biography of the Piddington family and his activities by Harry Minnett, who was also at Radiophysics. Harry Minnett did not, however, work with Piddington, but I believe with Dr Joseph Pawsey designing and improving the aerials of radar stations to make them more transportable and directionally tuned, and he may have been involved in the decision to get the NSW Railways under their engineer, J D Q Worledge, to build the aerial frame with its canvas housing for the generator, which characterised the LW/AW sets. Bert Israel, after his escape from the Japanese at Singapore, worked closely with RPL as Radar Liaison Officer in Sydney, and I believe was one of the people who foresaw the need for readily transportable equipment so that stations could be sited in remote areas in the north of Australia and New Guinea. The answer to the frequently cited report of the disagreement between Pither and Piddington on the failure to have the Darwin station ready to prevent the devastating first raid on Darwin or Moresby is that neither was really responsible - it had a number of causes. First, negligible assistance was provided by RAAF H/Q at Darwin. Secondly, the radar team sent up from Melbourne had no field experience, and thirdly, the ShD aerial intended for use there had to be sawn into pieces so that it could be transported by air then reassembled. However, as we know, the station was at least operative for subsequent raids and P40s got into the air in time to disrupt the invaders.

W/Cdr George Pither, in contrast, was not a research scientist, but a permanent Air Force officer who was an extremely competent administrator and who understood the use of all forms of radar and, to a large extent, the requirements in manpower maintenance and supplies not only of radar components but of fuel, rations, ancillary needs and other necessities of life to support a remote radar station. Air Commodore Bill Garing spoke

of him as "the best signals officer in the RAAF". After a botched operation at Caulfield Hospital in Melbourne, Pither had been forced to give up operational flying and became the service officer who was sent to England to learn about this "new-fangled RDF". At the end of the war he had established a new technical division of the RAAF consisting of some 300 officers and 4,300 other ranks. He overcame a lot of entrenched resistance from the civilian and service staff at RAAF H/Q and encountered some jealousy from other signals officers of equal or higher rank, but by sheer persistence managed.

With dedicated support from a group of mostly younger, non-permanent officers, Pither undertook a wide range of activities, including:

- arranging training for newly enlisted personnel - for officers at Sydney University under Professor Victor Bailey and for mechanics at Melbourne Technical College and Point Cook;
- consulting with RPL and industry on the design and manufacture of radar sets and ancillary equipment;
- selecting sites for radar stations with the assistance of Day, Wadsley and others;
- establishing RIMU at Croydon, Sydney, to provide spares, some equipment and stores for radar stations;
- establishing Radar Wings to coordinate reports from various radar stations before passing on to fighter sectors;
- liaising with other services on the use of radar, eg the installation of IFF on ships.

In all of these he was guided by the principle that radar was an essential factor in providing an adequate defence of Australia. His lengthy and detailed but unpublished report entitled *An Account of the Development and Use of Radar in the Royal Australian Air Force* (December 1946), describes in detail but concisely most of his activities during the war with scarcely a mention of the opposition and problems he must have encountered with RAAF bureaucrats in Melbourne and elsewhere as well as with a few jealous colleagues. After the war, most radar stations were closed down and their personnel returned to civilian life. Pither, promoted to Group Captain, was appointed Commander of Woomera when it was a rocket and atomic bomb testing base, not a detention centre. He retired in 1966 and unfortunately died in 1971.

A Note on 29RS

Ted Williams

In *Radar Returns* for November 2006 (Vol 11 No 2), page 8, Ed Simmonds is not certain when open-wire feeders were installed into the new transmitter and receiver supplied to 29RS at Port Moresby in October 1942. Certainly, it was not, as he suggested, done by Williamson and Field when they visited in December 1942 to match and phase the antenna.

In accordance with the RAAF policy to install open-wire feeders in all appropriate equipment, F/O Ben Asman and I spent a considerable period of time making such conversions and I am able to say that such feeders were not installed at 29RS until I did so in or about September 1944, with the assistance of the station mechanics.

A Note on 301 & 302RS

Harry Spry

The early 301/302 stations (initially undesignated) were unique in that they used modified ASV units.

They were not designed for ship detection. When briefed (by Pither and one other) on taking over the equipment in May 1942, I was told that their aim was mobility, using no more than five men, and designed to suit to war conditions expected in New Guinea and parts north. That they spent their operational lives at Milne Bay was fortuitous, so later reference to them as 'Milne Bay Specials' was misleading. 301 at Kanokopi was well-positioned for major shipping entering Milne Bay, while 302, at the tip of East Cape primarily extended the coverage and range of 37RS at Gurney base, being on the track of Japanese bombers coming down from the north before turning near Normanby Is. to make their runs up the Bay.

They were designated as units in July 1942, but Don Morrison and I were given the numbers 301 and 302 when we took charge of the units in May 1942 (and I was promoted Corporal as CO of 302!). 27 July 1942 refers to the official formation date when the operator teams were posted from Townsville. Colin Knight took over from Morrison before 301 went to Kanokopi.

Their stint at Kanokopi and East Cape until March 1943 comprised their operational existence and both stations were officially disbanded at Port Moresby on 23 June 1943.

The two stations were later reformed with LW/AW equipment at Richmond in 1944.

A Note on 31RS

Ed Simmonds

A book recently published, *No. 1 Mobile Works Squadron, An Oral History*, edited by an ex-RAAFie, Syd James, has

suggested that the Squadron was responsible for the construction of the initial building for 31RS at Dripstone Caves. Further research has clarified the question of the construction work.

W/Cdr A G Pither, Director of Radar, flew to Darwin on Wednesday 28 January 1942 to choose a site for the experimental radar set which had been delivered to RAAF Richmond on 24 January for installation at Darwin. The next day, he settled on the site at Dripstone Caves and sought the help of the local Director of Works, Mr Eric W Stoddart, to have a suitable building constructed urgently. Stoddart had been Director of Works for ten years or so and in 1942 was also responsible for the Allied Works Council.

The installation party of P/Os Hannam and Glassop, with three newly trained mechanics, arrived in Darwin on 5th Feb and reported finding workmen busy finishing the building. Most of the equipment seems to have arrived on 7th Feb, with the remainder arriving, with P/O Hulls on about 21 Feb, by which time the building was complete.

The fact that No. 1 Mobile Works Squadron was not available for such work before 14 March 1942 rules out its involvement in laying the slab for the building.

That, of course, is not to say that the squadron did no work later for the radar station. It could perhaps have built a slab and building for the living quarters (tents were in use until well after the unit was operational) and/or possibly an ablution block.

Communications in Wartime

Erie L. Unthank

In November 1944 I was temporarily posted from 27RS at Dunk Island to 43RS, Portland Roads, on the Cape York peninsula, well beyond Cooktown. Trouble was, nobody seemed to know how to get me there. From Townsville I was sent to the Transit Camp at Cairns.

This proved to be fairly lonely, though quite comfortable, because, as there were few in the camp, I was given one of the rooms reserved for sergeants. Nothing to do but lie in the sun waiting for midday when the beer came on at the pubs.

One day, the sergeant in charge of the camp asked me if I would mind cutting some wood for the cooks. I obliged, but broke the axe handle after about 10 minutes. Genuine! I spent an hour or so sharpening the axe, until it was midday.

When we got back, a new axe handle had been delivered so I fitted it but managed to cut the end off my thumb. I

spent a week or so in the Army Hospital at Redbank while they considered whether to do a skin graft. They decided against it and I was discharged on the morning of my twenty-first birthday.

Almost forgot! The only time I was on a 'charge' was at that hospital. Marched into the Colonel, with guards in front and behind, to answer a charge of "stealing corn cobs". Even the Colonel found it hard to believe. "Truly, Guv, I was innocent" And the Colonel agreed.

Back in Cairns, I went AWL and took the train to Tully, hoping to celebrate my birthday with some of the Dunk Is. boys and a certain young lady in town. I met both, including Harry Simpson, my CO, who told me that my attachment had ceased. I explained that I was AWL and would have to return to Cairns. Simmo was understanding and the incident was never mentioned again.

It was now 10 December, about a month since my attachment. I returned to Cairns the next day, and within a few days was put aboard the HMAS *Three Cheers*, a largish cabin cruiser requisitioned from a southern yacht squadron, for transport to Portland Roads. After a leisurely trip up the coast, which included a day or two at Cooktown and a visit to the radar there, then to Stanley Is. and the radar there, (while the Navy crew gathered oysters - so many that we eventually had to throw the rest overboard - oysters, not the crew).

The Captain of the *Three Cheers* dumped me on the Portland Roads jetty about 3 am, and then left immediately to catch the tide. I had a rifle, no ammunition and no food. Then followed the most frightening few hours, when I thought I was the only inhabitant on Cape York, but at sun-up I left the jetty and started looking for the radar unit.

Several hours later I hadn't found it and panic was setting in. Then, in the distance, I heard dogs barking. That was enough, I headed off through the bush and burst into a camp of very surprised radar buffs. Eventually, after a very late breakfast with the Portland Roads boys, they offered to drive me the 30 miles or so through the bush to the Iron Range air strip.

My luck had turned, as an ANA Douglas, which had called in for refuelling, was otherwise empty and I was offered a lift back to Townsville. So, six weeks to get there and one day to get back! Dunk Island next day, in time for Xmas.

In summary - someone must have known how to get personnel and stores to Portland Roads, but no one thought to tell me.

Well, radar was meant to be secret!

STATE ASSOCIATIONS

VICTORIAN RAAF RADAR ASSOCIATION

RMIT Plaque Dedication

This project began in December 2002, when the late Bill Harnath, as assistant secretary of the Victorian RAAF Radar Association, wrote to RMIT University. The VRRRA offered to provide a bronze plaque which was to be mounted on the wall of the Radio School at RMIT. It was intended that the plaque commemorate the contribution made by RMIT to the allied war effort during WW2. In those days, the university was known as Melbourne Technical College. Unfortunately, Bill didn't know that at that time RMIT was in the midst of a drama with their new computer system which almost put the university out of operation. Hence our proposal was a problem which RMIT did not want to know about.

Later, in early 2005, Bill's son Chris took over when illness prevented Bill from continuing. By this time, RMIT had overcome all their computer problems and enthusiastically approved of our proposal.

The chosen date, 15 August 2007, was the 62nd anniversary of VP Day. However, there were still problems because, by this time, the Radio School building, (Building 9) was a construction site, with two new levels being added, and was not accessible. The unveiling ceremony was held in RMIT's Storey Hall, and the plaque will be in safe storage until the work on Building 9 has been completed.

Almost a hundred people were present, including representatives of the civic and political scenes, plus the RAAF, both past and present. The presence of 35 members of the VRRRA prompted the comment that this would be one of the few occasions when you would be able to see so many octogenarians in the one group.

VRRRA President Alex Culvenor gave a brief history of RMIT's wartime involvement, explaining how over 23,000 men had been trained in the various skills required by a wartime RAAF. Of this number, 5,300 men became wireless and radio mechanics (radar mechanics)

The Vice-Chancellor of RMIT, Professor Margaret Gardner AO, thanked Alex for his kind words. She explained how RMIT was involved in a number of other activities which had proved invaluable to the war effort. She told how, in the early days of the war, components of the Beaufort bomber were assembled at RMIT, as part of the training of workers for Australia's new-born aircraft industry.

A very enjoyable afternoon concluded with refreshments provided by RMIT.

Other VRRRA Projects

We are advised that there has been no further progress at Point Cook Airbase, concerning the proposed new Memorial Garden, in which we are assured that our plaque will be mounted.

Heritage listing of the Exhibition Building is still preventing our plans for a commemorative plaque to record the building's wartime history. Prof. Gardner, who is a member of the Heritage Council, has promised to do what she can to help.

Here is an email received from Keith Rossi at ANZAC House, in response to our Newsletter sent to him for information:

Dear Len,

Yes I do like your new letterhead - it reminds me of some of the radar stations I saw during WW2. I think the first one I saw was in early 1944 when I was a member of a small party of 7 that left Milne Bay in a former pearling lugger on what the Americans called a Mission. The RAAF owned the lugger apparently as we were asked to take some mail, food replacements clothing etc to a radar on a tiny island between Papua and New Britain on our way to New Britain. We dropped anchor inside the reef and saw what looked like what the aborigines must have appeared to Captain Cook when he arrived at Botany Bay. Naked except for loin clothes, they danced around like dervishes. We reckoned they hadn't seen a white man for ages. They were off the planet - troppo - as we used to say. We couldn't stay for long but the poor beggars were so hungry for gossip other than what they got from listening to Radio Australia and Reuters News Service that our skipper reckoned that we should invest an hour or two for their wellbeing and morale.

Then, perhaps 30 or more years later, as Secretary of 2/2 Field Regiment Association, I went to the 39ers Association in Carlton to book their function room for our traditional Anzac-eve Reunion. Big shock. It had already been booked by the Radar Association. Desperate, I contacted its Secretary, a fellow named Ralph, expecting a fight or at least a nasty exchange. But no, all Len said "I think it will be OK, we can make other arrangements"

May you and your fellow RAAF Radar men all ride to heaven on a radar beam!
Thanks Len.

Warm thoughts from Keith Rossi
Len Ralph, Hon Secretary

RADAR BRANCH NSW

At the Annual General Meeting for 2007 held on 20 March, Walter Fielder-Gill, recovering from a severe stroke, resigned from the Committee after 35 years as President. Vice-President, G/Capt Terry Delahunty AM, was elected President and the meeting approved his motion that Walter be made a Patron of the Branch. Cec Blumenthal was elected Vice-President.

With the end of the Fielder-Gill era, our Branch continues its journey into the 21st century. It is actively recruiting post-WW2 people and is financially viable. The next function is the Battle of Britain ceremony in Martin Place, Sydney, on 14 September, with lunch afterwards at NSW Parliament House. The Christmas lunch will be held at 'The Landings' in North Turramurra on Friday, 7 December.

Howie Campbell, Branch Secretary

Walter Fielder-Gill is making slow but determined progress in his fight for mobility and independence. He has been home in the care of Lae, his wife, for some weeks now, and we wish them both well in what is clearly a courageous venture. He aims to take part in the Anzac Day ceremonies in 2008. Good luck to him from us all!

Editor

Wedge Island Reunion, 2007

Morrie Fenton.

The 7 Radar Wedge Reunion this year was a very happy and enjoyable affair made more so with the old veterans, their friends and relations, and a group from 10 RS Cape Jervis, the sister station to 7RS.

It was good to see younger folk carrying on the traditions of our gatherings with Ian, the M/C doing a great job at the top table, and Claire and Jan also helping to share the load. And Edna, our island neighbour of 60 years ago also joined us - it was good to see her again.

As a 'special,' we presented a descriptive talk of a morning on another island - Peron Island - illustrated with a dozen or more photos projected on a screen, and the idea appeared very successful.

Some 40 folk came this year including a couple of stalwarts from afar, also Shirley and Jack Measday, our old CO. A feature of interest was a special 64th Anniversary cake, decorated on top with a photo of the Doover printed on edible rice paper - who thought we'd ever eat the place!

Who knows - we may enjoy another reunion next year - perhaps the final.

POST-WWII RADAR RETURNS

BROOKVALE, 1955-1958

Rex Gillham

Having read with enjoyment Howie Campbell's memories of his days at Brookvale from 1959 onwards, my own memories started to formulate so I have decided to put them down on paper in the hope that some of the others who were there will find interest and maybe even a smile in them.

I came to Brookvale early in 1956 in a rather roundabout way. Having served in the RAF from 1948 to 1950, trained as a telecom operator (tape relay, teleprinters, RTT, PMBA switchboards etc), with postings to ops-room signal sections at Biggin Hill, Manston and Sandwich radar stations. After a couple of years in civvie street and two periods of reserve duty I answered an ad for ex-RAF bods to join the RAAF which was rebuilding in 1952. There were no openings for radar people at that time but telecom ops. were required and, though we all had to drop rank to LAC, I became a RAAF member.

On arrival, I kitted out at Laverton, spent a couple of weeks getting used to service life again, then was posted to Uranquinty near Wagga Wagga, NSW. 'Quinty' was a wartime flying school, just reopening after a period as a migrant hostel for mostly Italian migrants; actually about 30 were still there, employed as gardeners etc. It was now designated as No.1BFTS, with a few old Wirraways waiting for the trainee pilots to arrive.

Quinty was a bit of a shock; it was in the middle of nowhere between Wagga and The Rock, very hot, very dusty. I was the only trained Telecom op and found that the signals office consisted of a table, chair, typewriter, electric jug, toaster and the main feature - a very old dolls-eye-type manual switchboard, a PA system and a radio receiver to monitor the navigation beacon. Actually Quinty turned out to be a lot of fun - most memorable being in the back of a Wirra looking for bushfires on Christmas Day, behind the pilot, a F/Sgt just returned from ops with 77 Sqdn to be an instructor. Postings to Ballarat, Darwin and Melbteclu, Froggnal followed, before openings for remuster to Aircraft Plotter.

I joined No 2 Plotters course at Ballarat for part A, then to Richmond for the practical part B, held in the old wartime underground ops room and on the job at the Army post at Georges Heights where the RAAF had detachment operating a very old English-type 'A' Scope radar which only worked for very short periods.

Doug Stewart, another ex-RAF type, was the plotter there who gave us all the details. The plotter who looked after things at Richmond, Bob Brown, was also ex-RAF.

And so to Brookvale which was in the process of being built by 5ACS. It was pretty basic at the domestic site, with everyone messing and eating in the original dude-ranch house 'Boomerang' while the huts and messes were being built. The officers and sergeants had dining rooms and bars, and airmen had the big veranda. Further down the road, the ops site was being installed by service and factory techs. Manly and Brookvale towns were a short bus/truck/jeep/car ride away.

As there was no plotting to be done, we were employed on various tasks all over the place: stores, messes, digging and gardening. I was lucky; being multi-skilled I worked in the sigs office and drove a 500-gallon blitz water tanker (we had to cart water daily to the domestic site until the big mains were connected).

By now Doug Stewart and Bob Brown had arrived to be corporal instructors for future courses when the unit became fully operational. Don Smith, also a cpl plotter, arrived from Woomera where he had spent several years. Junior Hillary who also arrived was a GCA/Plotter operator with bags of experience.

As I could type, I worked with Doug, Bob and Don compiling the training notes for future courses in a small room behind the main ops room which was not yet completed. Joe Ulett arrived in July 1956 and setting up the tote and ops room got under way.

In September 1956, I became the first to get married at Brookvale, to Shirley, who was a RAAF nurse at Richmond. We had a little garden flat down the road in Beacon Hill and the place was full to the roof with God knows how many people. The combined kitchen supplied the food, everyone brought grog and Jimmy Nichols, the Adj, scratched his Holden trying to back it out to go home.

That year we had very bad bushfires in the area and on Christmas Day, Fred Boorman, the CO at that time, said we should all go out and help fight the fires after lunch, so off we all went to do so. I was driving the old 500-gallon blitz truck, charging about the bush with blokes hanging all over the back and sides putting out spot fires, when we almost ran over a very old gentleman driving a old Rover car coming the other way on a bush track, escaping the fires. I can still see his frantic face looking up at us as we charged by at

about 40 mph which was about as fast as the blitz would go. Returned home early in the next morning to a very cross new wife who thought I was enjoying a few drinks at the mess. It was the smell of burnt hair and smoke that saved me. Oh yes, we are still married, 51 years later.

I had many interesting moments with Joe Ulett, as those who knew us would appreciate - Joe did not like Poms but he sure was good at his job. By now we were fully operational, with demos put on for visiting VIPs, both RAAF and USAF. We had a couple of USAF officers posted in about this time and two plotters from No.1 course, Strom Charlton and Normie Burgess, had returned from US where they been gaining experience with the USAF.

Next came an interesting time for me. I was seconded to do the plotting for a group of boffins from ARL, Fishermans Bend, while they were attached to Brookvale conducting research on ground-to-air guided missiles. It was most interesting but of course I could not tell anyone what we were doing (airmen I mean, of course senior people had to know). I still have a RAAF PR photo taken with the boffins, a USAF general and W/C Fred Boorman watching while I was plotting.

By now I was due to either leave the RAAF, sign on again or join ARL at Fishermans Bend in Victoria. I had received a very tempting offer from the York Motors group of companies in William St Sydney; I decided to accept and stayed with them for over twenty years, ending up as a director and general manager, so I had made the right choice.

I enjoyed several years as an honorary member of the Sergeants' Mess and have remained friends with several ICARU people, including Fred Boorman, until his death several years ago. Judy Boorman remains one our best friends and we have so many happy memories of Brookvale and the RAAF in general.

There must be many other happenings from the early Brookvale days that I have forgotten; please forgive me if I have overlooked anyone.

REUNION IN MALAYSIA, 2008

The ex-RAAF Radar Air Defence Group is planning a 50th Anniversary reunion for August 2008 in Penang/Butterworth to celebrate 114MCRU's arrival in Malaya in 1958. For further details, please contact Brian (Spider) Hook 07 4124 3539 or nanafarfar@optusnet.com.au

PS: 114MCRU is now operational in Afghanistan (see p. 12).

MY DARWIN CONNECTION

Jill Dawson

There's something about the smell of Avgas and the drone of a C 130 Hercules aircraft that helps to reignite memories of a special time in my life.

It was a sunny April morning in 1972 at Richmond Air Force Base and this naive, fresh-faced 20-year-old from Melbourne was filled with anticipation for what lay ahead. I'd recently qualified as an Air Defence Plotter in the Royal Australian Air Force, which was then known as the WRAAF. My 'family' of about one hundred plotters and technicians were preparing to 'take off for a five-week air defence exercise in Darwin.

As we boarded that flying fortress in our duggy overalls, I sensed a collective excitement amongst us. This was going to be the opportunity to showcase our skills and our training in a simulated war scenario. While the aircraft taxied along the tarmac, I had no idea that we would be crammed in like sardines for eight long hours. It was a feat of endurance that proved to be far from exciting.

Time nevertheless passed quickly thanks to the numbing effect of the engines' monotonous drone, which sent most of us to sleep. On landing, we all headed straight for the RAAF Base swimming pool to loosen up our stiff limbs. It worked a treat.

Over the next five weeks, there were no weekdays and weekends as such. For all of us, our lives revolved around a constant '24/7' rotating shift. It didn't take long to adjust because we were all in it together.

Back then, an air defence plotter performed a number of related roles, such as 'direction finding/radar monitoring', 'height finding', 'flight identification' and the more physically demanding 'plotting'. For one reason or another, it is the latter role that I recall most vividly.

Plotting required the unusual skill of writing backwards on a designated sector of the four-metre glass 'radar screen'. This procedure was necessary to present a clear war picture for command personnel, who sat on the other side of the 'screen' in the operations room.

At any one time, there were four plotters on duty - two on the top (northern) sector and two on the bottom (southern) sector. These were further divided into eastern and western sectors, so that the task of maintaining accurate and timely aircraft plots was simplified most of the time.

While the large screen was lit, the rest of the operations room was, necessarily, a very dark place. As a consequence, some of my fellow plotters tripped and fell while

climbing or descending the narrow ladder leading to the northern section of the plotting board.

And whenever the war games heated up, so too would the plotters on duty. Between all the crouching, bending and stretching to reach the desired coordinates on the glass screen, a plotter could work up quite a sweat. For me, those times on exercise were physically draining, but I loved it.

One evening when I was on duty, two 'hostile' aircraft suddenly disappeared from the radar screens, and all hell broke loose. Where had they gone? A few minutes later, the foundations of the operations room shook with the roar of aircraft (F111s) flying very low overhead. It was the two 'missing hostiles' that had apparently flown under radar coverage, and which effectively scared us all half to death! I was (and still am) grateful that it was a mock of the real thing.

When we weren't playing war games, we really enjoyed ourselves off duty. There was always a party, a picnic, a swim, any excuse to kick up our heels away from the operations room. And I certainly didn't want that five weeks to end.

The return to Brookvale was uneventful by comparison. However, I soon learned that I was to be posted to RAAF Base Williamtown (near Newcastle); a posting that would take me in another direction for ten months. It was here that I had the privilege of being in the first group of plotters to be trained in computer hubcap radar, a new and strictly experimental radar identification technique.

Sadly for those who had invested heavily in this new radar technology, the system was typically 'down'. In other words, it didn't work most of the time. Whilst this was frustrating at first, we plotters soon learned to adjust to our abundance of leisure time. We played volleyball! No kidding, our little unit was a lot like the MASH unit we all know and love. But that too had to come to an end.

Out of the blue, I was advised that I was to be posted to Darwin to replace a colleague. It was unexpected but at least I had tasted the place for five wonderful weeks. Unfortunately there was unforeseen drama to follow.

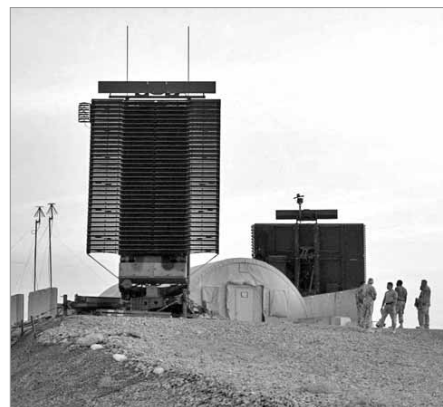
The air defence exercise had been like a holiday in paradise for me, one that was taken during the balmy 'dry' season. Now, I was to taste Darwin in the 'wet'. It is a time of year that was often referred to as 'the suicide season', and with good reason. It's very hot and very wet. And as for work, reality soon set in. The role of an air defence plotter up there during

normal operations was a very boring one indeed. I needed an outlet.

That's when I started to discover many of the natural wonders on offer in the Northern Territory. I bought a canoe, made Katherine Gorge my second home and I started writing poetry. It opened up my mind and my soul to a whole new perspective on life.

After eighteen months in Darwin, I felt that it was time to 'go home'. I made that decision just two months before Cyclone Tracy blew the place apart. Many of my dear friends lost almost everything they owned. I felt guilty, but very, very lucky.

I have gone on to do many other things in my life, but I have never forgotten my special connection with Darwin. In particular, it is the many friends I made in those early years of my professional life that matter most. Fittingly, a reunion of air defence plotters is to be held at that very place in 2009. I can hardly wait!



Air Defence Radar at Kandahar airfield

114MCRU IN KANDAHAR

Based on Dept of Defence media releases

In mid-August, 2007, a RAAF Control and Reporting Centre (CRC) was set up at Kandahar Airfield in southern Afghanistan with a detachment of about 75 members of 114MCRU from the Surveillance and Response Group based in Darwin. It has been assigned an area of the country for which it will manage the combat air operations and provide continuous air surveillance of the assigned area and coordinate all coalition combat air operations in that area, taking over control of the Kandahar airspace from the United States. CRC is also responsible for coordinating air-to-air refuelling.

CRC will operate 24 hours a day, 7 days a week. This deployment will give Australian Air Combat Officers the opportunity to demonstrate their capability and also develop and expand on their knowledge and relationships with Coalition partners. This is another event in the long history of 114MCRU and is the unit's first operational deployment since the 1960s.