

RADAR RETURNS



Signals & Echoes For RAAF Radar Veterans

IN THIS ISSUE

Editorial	1
Faded Echoes	2
Tributes	2
Personal Notes	3
They Also Suffer)	3
Radar in the Air	4
31RS, Dripstone Caves	6
346RS Goes to Bundralis	7
Bailey Boys	8
Radar Plaques	8
Wedgetail Delayed	9
Postwar Radar	9
7RS Reunion	9
The RR Website	10
State Associations	10
Publications	10
A Last Word	10

EDITORIAL

With this issue, *Radar Returns* is launched into its second decade, and it is timely to give thought to its future.

At present, we distribute just over 700 copies of each issue to a readership made up of about 550 WWII RAAF radar veterans, (including some WAAAF and a few widows), about 100 postwar RAAF radar people, mostly retired, and 50 or so academics and others who are interested in the history and application of radar.

Clearly, the first group, now largely octogenarian, is shrinking at a rate of about 8-10% a year, though it is still being supplemented by a few veterans who have previously not been in touch. The second group hasn't changed much over the last year or so, but can be expected to rise once we are able to include material of personal interest to them, and it is in their hands that the future of *Radar Returns*, if it has a future, must lie. A note on this matter appears on page 9. The third and smallest group is not changing much either, but can be expected to grow slowly if the reputation of the newsletter grows as a source of useful, reliable information on an aspect of Australian history that has in the past been overlooked and sometimes misrepresented.

A factor in the future of *Radar Returns*, indeed of any such newsletter, is the position of editor. In April 2004, the founding editor,

Pete Smith, a very active member of that second group, made a sudden and tragically premature exit from the task, to be replaced as an emergency measure by a member of the first group more than thirty years his senior who, though he had the experience, the skills and the facilities to cope with the task, clearly was not to be expected to carry it indefinitely.

As that person, I can say that I do not have any reason to believe that I will be forced to leave the job in the immediate future. But one must be realistic. It concerns me that if, for any of a number of reasons which are perfectly possible and even quite likely at my age, I were to drop out of the scene, there is no obvious replacement. It is, of course, possible that in such an emergency someone would come forward, though probably much more likely that the project would fall in a heap. The fact that there is now a website could possibly delay the collapse for a time because the costs are less, but without the print newsletter I suspect the balance would swing rapidly away from the WWII folk towards the younger group. Whether it would survive in these circumstances is far from clear.

That is why I seek to develop a section of the newsletter which will be devoted to the postwar group. The hope is that, by broadening the coverage and readership, the transition can be rendered 'seamless', extending over a period of time so that it can serve both main components of the readership.

I would be delighted to have some comments and suggestions on this matter.

This Issue

Once again we recognise the importance of airborne radar in WWII, this time with the first part of a two-part article from Dr Don Richards, who was a Course 1 Bailey Boy with a range of experience in this area. The other principal article is what should be seen as the definitive story of the establishment of 31RS at Dripstone Caves in February/March, 1942. Ed Simmonds has spent some years collecting and considering the evidence and here presents his findings.

Noel McCormack has given us a picture of the early days of 346RS in the Admiralties campaign and Morrie Fenton draws attention to the spread of radar commemorative plaques. There is a note on the origins and structure of the 'Bailey'

courses, and another on the need for a better understanding of the development of radar since the war. There is, unfortunately, the substantial list of 'Faded Echoes' to which we are becoming accustomed. And a note on the *Radar Returns* website details its current state and proposed development; we would encourage all our readers to explore it.

Contributions

Despite the comments above, *Radar Returns* obviously needs more than just an editor if it is to survive. Crucial in this respect are contributions from the readership. We need more contributed articles, and more input of news and views if the newsletter is to fulfil its function as a linking factor between people with backgrounds and memories in common. This applies, of course, not only to those with service in WWII but also, and at this stage, perhaps particularly, to postwar people. Tell us of your experiences; of people with whom you have lost contact and would like to catch up; of people you know or know of who have become 'Faded Echoes', providing tributes if you can; of radar-related books you have read or would like to read; or of reunions and other contacts with those you have known in the service. In other words, use *Radar Returns* as a resource; it has often proved useful in that capacity. It helps to have contributions in electronic form or at least typed, but I am more than happy to receive them handwritten, though preferably legibly.

Equally important to the survival of *Radar Returns* are your financial contributions. There have been not quite 400 such donations since I took over, a number of them being repeats. With a readership of more than 700, this means that there are many who have not helped, and the reserves are gradually being ero

ded. Please help if you can.

Warren Mann

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FADED ECHOES

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

Note: In each entry, the third line gives brief information about the person listed. The brackets enclose RAAF training, where known. Symbols used: B - Bailey course; R - 1Rad Sch; O - Officers' course; M - Mechanics' course; Op - Operators' course; figures - course numbers. G - Ground radar; A - Airborne radar.

Phillip John Brady

2/2/1922 - 16/1/2006
NSW; F/Lt Rad Off.(B1, RO6A)

Brian Elmer Deam

18/8/1922 - 5/7/2006
Vic; Sgt Rad Mech (RM24G)
14, 17, 18, 40, 322RS

Ralph Slade de la Lande

10/8/1923 - 27/5/2006
Vic; Cpl Rad Mech (RM27G)

Wallace Charles Duckering

16/5/1925 - 8/12/2005
Qld; LAC Rad Op (ROp85); 344RS

Donald Henry Hibbins

2/5/1922 - 21/3/2006
Vic; F/O Rad Off (B2, RO14G)
109, 105, 319RS, 44RW, RLO (Sydney)

Ronald Douglas Hill

13/3/1918 - 16/6/2006
Vic; F/O Comm Rad Mech (RM12G)
CO 312RS 1/45 - 1/46

Raward Thomas Jones

15/6/1922 - 9/8/2005
NSW; LAC Rad Mech (RM36G)

William Francis Kelly

17/12/1924 - 8/4/2006
Vic; LAC Rad Op (ROp76)
15, 48, 337, 345RS

Hector William Langford

28/1/1926 - 3/3/2006
NSW; LAC Rad Op (ROp103)
14, 31, 344RS

Graham Owen Penny

31/1/1935 - 6/12/2005
NSW; Postwar;
1, 2, 3CRU, 114MCRU, 26Sqdn

Basil Boyd Prentice Smith

5/5/1918 - 12/6/2006
NSW; LAC Rad Mech (RM48G);
19, 304RS

Tennyson Ross Smith

2/1/1923 - 26/5/2006
Qld; Sgt Rad Op (ROp8)
25, 37, 49, 337, 165RS

Ronald James Taylor

28/3/1922 - 22/3/2006
ACT; Sgt Clerk Gen 305RS
m Irene Edith Roberts (1922-2002) WAAAF

Donald George Thomas

13/12/1917 - 2006
ACT, F/O Rad Off (RO1G, 2A), ex-POW

TRIBUTES

Ralph Slade de la Lande

Ralph has died after a four-year battle with leukaemia and many of us will miss him.

Born in Melbourne in relatively humble circumstances, he was the eldest of three boys all of whom have made significant contributions. Ralph's education was in state schools and at Melbourne Boys High School before enlisting in the RAAF as a trainee wireless mechanic. He then completed a radar course at Richmond to become a radar mechanic. Despite having been trained in ground radar, most of his war-time experience was with airborne equipment, though he did have stints with 39RS (Point Keats) and 61RS (Peron Island), as he recounted in an article in *Radar Returns* (Vol 10, No 1, P 6).

Discharged in January 1946, he married Lois Sheffield, a former WAAAF whom he had met during his service, and then began an electrical engineering degree at the University of Melbourne. Graduating at the end of 1949, he joined the Department of Civil Aviation (DCA) where his first task was to adapt wartime radars for civil aviation and meteorological purposes. Later he became responsible for implementing an infrastructure program for the Northern Territory to replace the ad hoc facilities in use since the war. He was appointed senior airways engineer for the Victoria-Tasmania Region in 1958.

In 1961 he went to Indonesia as a Columbo Plan expert and remained there until 1963 in a period of political turmoil and civil unrest under President Sukarno. There he was resident supervising engineer for a major aid project linking all nine major centres in Indonesia, as well as Sydney and Singapore, with HF speech and teletype equipment. Returning to DCA in 1964, he was appointed coordinating engineer for the new Tullamarine Airport with wider

responsibilities for infrastructure facilities across Australia.

He joined the Bureau of Meteorology in 1967 as supervising engineer responsible for development of the Bureau's observational instrumentation network and became head of the engineering branch in 1975. Here his responsibilities expanded to include facsimile and satellite communication and the development of a drifting buoy to report meteorological information via satellite. This enabled Australia to take an active part in the WMO's 1979 Global Weather Experiment with 50 such buoys in a 300-buoy southern-hemisphere network.

In 1979, he became acting Head of the Bureau's Facilities Branch, responsible to the Director for the provision of all facilities needed for the acquisition, dissemination and exchange of observational data and for international collaboration in the development of standards and practices.

Between 1982 and 1986, Ralph was detached to join the Australian Overseas Project Commission's team of advisers to Saudi Arabia's Meteorological and Environmental Protection Administration, where his work included the development of a strategy to combat major oil spills arising from the Iran-Iraq war.

Retiring in 1987, Ralph has been active in a range of community activities. He served as councillor and member of the executive committee of the Graduate Union of the University of Melbourne, and was actively involved in the development and construction of a multi-storey redevelopment of its buildings. He also took part in the activities of Neighbourhood Watch, Probus, Frosterly and the Institution of Engineers. He was a member of the RAAF Radar Veterans committee/working party which organised the reunions in Adelaide and Geelong, and was a participant in all the other major reunions from Bendigo on. He also took an active part in functions organised by the Victorian RAAF Radar Association. Despite his illness, he maintained his interests until the very last; he will be greatly missed.

A devoted family man, he leaves Lois, his wife of more than 60 years, two daughters, two sons and five grandchildren, to all of whom we extend our deepest sympathy.

Warren Mann

William Desmond Kaye

26/12/1923 - 1/08/2005

From an early age we remember our father's stories of the war – how he came to join 'the Bailey Boys' and found himself in Sydney for a year. His time in Darwin at Hughes Field, and later at Tocumwal where he met our mother. And how all this had turned to a lifelong passion for radar.

TRIBUTES (Cont.)

Bill was a boy from the bush who had landed a job in the Engineering School at Melbourne Uni after taking engineering studies at Maryborough Technical High School in Victoria. In March 1942, aged 18, he joined the RAAF and was admitted to the 2nd Course of 'Bailey Boys'. This was a 6-month training course at Sydney Uni under Professor V A Bailey, set up to train officers for the RAAF in the new radar technology.

That was an exciting period for Bill. He had a sense of contributing to the war effort while studying new things in the romantic surroundings of Sydney Uni. A year later, Bill found himself an officer at just over 19 years of age. He was posted to the North-Western Area and served as a technical officer on radar stations at Cape Don and Yirrkala before moving to Hughes Field, near Darwin, to work on air-borne radar with No 1 Squadron as Pilot Officer, Flying Officer and later Flight Lieutenant. He flew on many missions north of Darwin, mostly in the Timor Sea. We can only imagine now how his natural curiosity, his strong ethical values and his quirky sense of humour developed during that time. These were formative years that influenced the rest of his life, both personally and professionally.

In 1944, Bill was posted to 7OTU at Tocumwall where he saw out the war and met Doreen, a local girl and his wife to be. I remember him telling us of monitoring the microwave transmitters by putting a neon lamp in his mouth - when the aerial rotated the neon would light up. This might not pass today's OHS rules, but you can get a glimpse of how a sense of fun and adventure was brought to otherwise tedious tasks.

After the war, Bill married Doreen, settled in Melbourne and completed an engineering degree. His job at Melbourne Uni had turned into a job with a group that was then part of CSIR and later absorbed into the Department of Supply. Transferred to the Weapons Research Establishment near Adelaide, he again worked on radar technology.

Soon after, he got a 3-year posting to London. On the way he stopped off in Baghdad for a short stint to consult with the British contingent there on various matters. In London he worked with the British Admiralty, again on aspects of radar and related technology.

Returning to Adelaide in 1953, Bill worked on Australia's early space program. In 1960, he was posted to Woomera to head up the Red Lake radar station for the Gemini project - remember John Glenn, the first American in space, and the other six astronauts?

These were exciting days - Woomera had the only southern hemisphere station, and was critical to maintaining communications.

Bill saw his task as contributing to the success of an important mission of universal significance. Occasionally we would accompany him to the station at Red Lake, marvelling at the banks of valve computers, and probably breaking all the security rules - but that was in the 1960s, when it seemed that rules were made to be broken.

In the early 1960s, Bill made two trips to the USA, to visit Central Control at Houston, and the Goddard Centre in Washington DC. There he met the seven astronauts, and brought back all sorts of trinkets which we still treasure today, as well as news of what was happening with this exciting world-first project. There were a lot of things going on also in Woomera to which we knew Bill contributed, and no doubt many others that we didn't hear about because of security constraints.

In 1966, Bill was posted to head office in Melbourne, and there his hands-on involvement in radar ceased. A few years later we were in Canberra, and to keep sane Bill took up studies in TV and later became a tutor at the TAFE College.

Retiring in 1988, he was able to apply some of the knowledge and skills he had acquired. Many of his friends and colleagues would get him to fix up their ailing TV sets, as no-one else would take on such challenges. Along with cryptic crosswords, computers, astronomy, trout fishing, golf and making model traction engines, radar remained his passion. It had given him a rewarding career - one that used his intuitive understanding of electronics, and was applied in the national interest in war and peace - as well as friends; many of his colleagues became his lifelong friends.

His career spanned the transition from analogue to the digital age that is now fundamental to our lifestyle. He embraced the digital age fully, having been exposed to early digital computing through his work at Woomera. He pursued computing in his retirement years, and could solve curly configuration problems, and always had a spare machine to hack bits from.

Others will know more detail of his war years and subsequent professional work. But his children recall the inspiration of his stories, and how much his life was shaped by those early experiences as one of the Bailey Boys. Indeed we cannot conceive of what his life would have been like if not for that opportunity when he was 18 years old. And we feel sure that the RAAF would not have been disappointed with his acquittal of that opportunity.

Tricia Kaye

Bill Kaye is survived by his wife, Doreen, his two daughters, Sue and Tricia, and grandchildren, to whom we tender our sincere sympathy.

PERSONAL NOTES**Keith Tudball**

It is with sadness that we report the death of Frances Tudball on 16 June 2006, after a brave battle over the last year or so with a brain tumour. She was an active, charming person and Keith and their family will miss her greatly. Our sincerest sympathy goes out to them.

Queenslanders in Trouble

The Queensland RAAF Radar Association has always made a point of including spouses as active members of the group. Noel Lynam has been its Secretary for many years and is now also Treasurer. In the last year or so, failing health has caused him to rely heavily on his wife Monica to maintain his effectiveness in the job. Recently, she suffered a small stroke which affected her speech and reading. We hope she makes a full and speedy recovery.

Bette Brown, very active wife of President, Bill, and member of the planning committee for several of the earlier RAAF Radar Veterans reunions, had a nasty fall, breaking her eye-socket. This led to double vision which has now been corrected in an operation and she is slowly recovering.

And Gordon King who is still active though blind, fell and broke his wrist but hastens to point out that it was not the fault of Radar, his guide dog.

Our thoughts are with them all.

Jo Dunbar

As many people will know, Jo is having a serious battle with cancer. She tells me she is "hanging in there" and is most grateful for the many cards, flowers and other expressions of concern that she has had. She was recently awarded Life Honorary Membership of the RAAF Association, a well-deserved recognition which has given her a great thrill.

We want her to know that our thoughts are with her.

Editor

THEY ALSO SUFFER

We are not alone in thinking that military historians have ignored the contributions made by radar during WWII. The following comment was made in the preface to a book called *Canadians on Radar in South-East Asia 1941-45*, published in September 1998:

"In the late 1980's many of us former radar mechanics who were attached to the RAF were annoyed to find that military historians had completely ignored us. We knew we did not win the war by ourselves, but we knew that we had contributed - and it irked us that our contribution had been overlooked."

Ed Simmonds

RADAR IN THE AIR - Part 1

These recollections of my time in the RAAF are related only by the order in which they occurred. They are some of the things that happened to me during the war that have stuck in my mind for some reason or other.

Happy reading! Don Richards

Late in 1941 W/C George Pither, head of RDF in the RAAF, visited Sydney University and talked to students in an overflowing lecture room about Radio Direction Finding. He spoke particularly to engineering and science students about the war in Europe and the need for trained officers for RDF stations being installed by the RAF as part of the defence of the British Isles.

Pither had arranged with the university manpower and academic authorities that a number of students would be released from second year engineering to enlist in the RAAF and, on the successful completion of a six-months training course, be credited with a pass in Engineering II. When the war was over they could enter Engineering III. So I, and a goodly number of others, enlisted in the RAAF and became the first Bailey Boys.

In the RAAF

After the Bailey course, we did the officer training course at Melbourne University and, being commissioned, went to the Radio School at Richmond NSW for the Ground Radar course; a group of us stayed on to do an Airborne Radar course.

Richmond Radar School

At Richmond I was getting used to being an officer, and I suppose the same applied to many others in our group. One day I was an AC1 under training and had been one for five months or so, the lowest of the low; almost the next day I was an officer, in a different uniform, with a different relationship to everybody except my course colleagues. I remember a couple of events that illustrate this difficult rebirth.

On the sprawling Richmond RAAF station, it was some distance from our quarters to the Radar School, so we moved between them as a squad, in the charge of our duty officer for the day. I recall our dismay and fury one time when we were given the 'eyes right' command as our OIC gave an impeccable salute to a rather startled warrant officer whose rank did not entitle him to it.

Then there was fellow student P/O Paul Phillips, with a crew of radar mechanics, starting to assemble an English type CH radar station on the lawn beside the Radar School. We stood around and watched and wondered whether the officer in charge should take a part in all the lifting and shoving and pushing that the job involved, or should he stand off and give instructions?

This was our first experience of trying to decide where the working interface occurs between the commissioned and the non-commissioned. Paul certainly involved himself in the whole operation! The same thought occurred to me some months later when I was at the top of a 60-foot-high wooden mast with Cpl. Fred Lee, trying to bolt on the antenna of an ASV beacon we were installing at Hughes, NT.

The Beaufort Bomber

Australia had started to assemble the British Beaufort bomber at Fishermans Bend in Melbourne and at Mascot in Sydney. My first posting (mid-1942) was to Fishermans Bend where I was in charge of a small group of radar mechanics fitting ASV II to the aircraft after they came off the production line. I used to go up with the RAAF test pilot (whose job it was to recommend the acceptance or otherwise of each aircraft) and check that the radar was operating. For security reasons, we then removed the units before the aircraft went on to the next part of the process, whatever it was.

There was some concern at the time that the homing antennas on the Beaufort (as distinct from the search antennas) were not as effective as they should be and I was asked to carry out some tests. I tried to do this but there was no suitable ground power supply, and the plane engine that carried the generator could not be run at the necessary revs on the ground long enough to get readings to plot a polar diagram, so we had to give up. This defect came back to haunt us some months later in Darwin.

My next move was to Mascot, doing much the same job, with the advantage that I could live at home and go to work each day.

At both plants the installation of the radar was not done on the production line but in what was called the Flight Shed, where the Shed Manager had his office and there was enough room for a couple of aircraft. It was done in this way I think because secrecy was regarded as important and also because it was a distinct process carried out by RAAF personnel under separate supervision.

Antennas were fitted on the production line and our job was to install the cables, tune the search antennas and do the internal wiring. We had to keep up with the production line so that aircraft did not bank up in the Flight Shed.

The ASV operating frequency was a secret and I was startled one day when one of the electricians on the production line came and told me what it was. He had worked this out by measuring the length of the center-earthed dipoles in the search array. It was necessary to consult with the electricians from time to time so we got to know them pretty well.

Generally the Flight Shed was off-limits to civilians, but people did come and go for good reason. However, the one forbidden thing was for a civilian to board an aircraft after the RAAF had accepted it. This was well-known by all the radar mechanics and we were quite aggressive about challenging anyone who looked like offending. I recall one occasion when an important politician, Minister for something or other, was being shown around the plant by the head of the Drawing Office. They were well and truly inside the Beaufort when we advised them, Sgt. Bill Franzi and I, that it was a RAAF aircraft and they must get out. I thought the ministerial minder standing outside would have a heart attack. Hurriedly ushering the minister out, the Drawing Office head apologised wholeheartedly and withdrew. I felt sorry for him because he was a good bloke, but he should have known better.

There was some danger in flying with the RAAF test pilot on an initial flight, but I think the most dangerous part of my work at Mascot was sharing an office with the Flight Shed Manager. He had an attractive young secretary who was clearly interested in young Air Force officers and as we were often on our own in the office I sometimes found it difficult to concentrate on my work.

Base Torpedo Unit - Nowra

From Mascot, late in 1942, I went to No.1 Base Torpedo Unit at Nowra NSW where selected aircrew who had finished their training on Beauforts were posted for training in torpedo dropping. The unit was commanded by W/C Owen Dibbs, known as 'Shorty' as he was well over six feet tall. I was in charge of a section of radar mechanics and we worked well together servicing the ASV in the Beauforts. We were part of the permanents, as were the instructors and crews, and the trainees moved in for, I think, six weeks. When their course was finished there would be a break of a few days and a new group would arrive.

W/C Dibbs was a Sydney engineering graduate and, early in the war, he had been sent to England to serve with the RAF on Sunderland flying boats. He was familiar with ASV and had developed a torpedo sight that used the shortest range of the ASV set to position the aircraft for a torpedo attack.

The initial part of the attack required the aircraft to be at 'dot' feet, (as close to the water as possible), and climb to dropping height when 3 nautical miles from the target, so the ASV receiver was modified to show that distance on the lowest scale. The aircraft then made the attack on a fixed course (as directed by the torpedo sight) at a fixed speed and height. The target's estimated course and speed were fed into the sight as the attack run was being made, and

RADAR IN THE AIR - Part 1 (Cont.)

after the drop the aircraft would break away and get down to `dot` feet again.

Within days of arriving at the BTU I went out with one of the instruction crews for a practice run over Jervis Bay. At first, I was busy with the Wireless Air Gunner who was operating the radar, but then I looked out the window and had an instant desire to go back to our warm little workshop. All I could see was water; it filled the window, I couldn't see the skyline, and no-one had warned me what it was like to fly at `dot` feet! You could feel the aircraft rise and fall as the pilot lifted us over the swells at 180 knots.

Our job was to keep the aircraft ASV sets well maintained, and I had also to lecture each course on radar principles and the use of the ASV equipment. I flew with as many of the trainee crews as I could find the time for, and my panic at `dot` feet faded when I realised the pilots were highly competent.

Towards the end of my service at Nowra I had gone on leave for a few days as there was a break between training courses and that was the only time one could get away.

I knew that as soon as I got back there was a special job to be done that was not a usual part of my work. The BTU had been instructed to carry out tests in the use of radar to enable secure communication between two airborne aircraft. Normal radio communication of course could be picked up by enemy receivers.

The idea was to use the radar of one aircraft and the Identification Friend or Foe (IFF) in the other. The IFF transceiver usually sweeps a band of frequencies, so that feature would be disabled and the IFF unit set to the frequency of the radar. Thus when the radar of one aircraft triggered the IFF in the other it would send back a low-power signal which would appear as a blip on the radar screen at the appropriate range. This in itself would not provide communication, and if the IFF set were simply switched on and off by a morse key to convey messages it would not be secure as the enemy would be able to read it with a simple receiver. So the circuit of the IFF set was modified in such a way that the pulse width of the return signal would widen slightly when the morse key was depressed, but there would be no break in transmission. This widening would be apparent on the radar screen of the triggering aircraft and could be read as a message in morse. This would make the communication very secure. However, no-one had any idea of what the range would be and in particular, how the range would vary with aircraft height, so we had been told to conduct experiments in the air, but no urgency had been attached to the project at the time.

Whilst on leave, my unit received a signal from RAAF Headquarters to the effect that the tests results were wanted urgently. So off I went to Mascot and was picked up by a Beaufort and taken back to Nowra.

We set up the two aircraft and I drew up the program for the test flights. It was going to take a while as it was to be done at night and the test pilot, F/Lt. Grey, whom I didn't know very well, wanted to limit the air time to 2 or 3 hours as it was going to need good concentration by all involved. So off we went out to sea off the coast somewhere between Sydney and Nowra, a wireless operator to key the IFF in one plane and me to operate the radar and record results in the other, plus crew, of course.

Well, it was great! For 3 or 4 nights we flew at various heights and, using the homing antennas, I recorded the distance that we were apart (for each set of heights) at which I was first able to read the message on the screen as we approached the other aircraft, which was circling the one spot. Having made one run we would turn through 180°, go away, gain height and turn again for another run. It was possible to see the blip from the IFF set of the other aircraft for an appreciable time before you could distinguish the pulse keying, and when you could, that was the time to read the range for that height.

I wrote the results up in the form of a report and sent it off to Melbourne as quickly as I could, but then got into terrible trouble. There is, of course, a proper way of doing a report of a test flight and I didn't know about it. F/Lt. Grey got on to me and wanted to know what I thought I was doing not following proper procedure. It turned out that he had to see the report and sign it as test pilot. Considering that I had done almost all the work except fly the aeroplanes, I hadn't considered that possibility, but I assured him that in view of the urgency I had sent the results away immediately, and was now preparing a full report for his signature. This pacified him, he was really a good bloke, and I went away, looked up the bit about Reporting Test Flights in Air Force Orders and set about doing the report again.

I really enjoyed the project. It covered completely new ground; night flying is fascinating and here we were communicating with another aircraft by a means other than conventional air-to-air radio; and here was another use for radar.

I have no clear idea of the tactical use planned for the communication. Later I was called on to set up a Beaufort with a dedicated display for the observer/bomb aimer, which may have had something to do with it, but then I was posted to Darwin and lost track of the project.

Torpedo dropping training and practice was carried out over Jervis Bay with a retired Sydney ferry acting as target. Practice torpedoes were used with their running depth set so that they would pass below the target. When the compressed air that drove the torpedo motor was exhausted each torpedo would float nose up and (hopefully) be retrieved by a workboat. As each course progressed W/C Dibbs would board the ferry with the world's oldest battery-powered dictaphone and record his comments as the trainee flew his plane into the area and carried out the attack on the ferry. The dictaphone would then be used in the evening to play back his comments as the basis for further instruction.

The volume from the dictaphone was not enough to be heard in the instruction room with the 40 odd crewmen sitting around, so the wing commander located a beautiful crystal microphone in a radio shop in Nowra and gave it to me to link up with the rubber tube that usually carried the sound from the dictaphone to his WAAAF secretary's aural headset. The microphone would then feed the amplifier in our movie projector. I didn't think the system would work due to the low output from the dictaphone, but W/C Dibbs suggested that we make up a small metal horn, flanged at its larger end, that would be attached by the bezel screws to the front of the microphone and tapered back to the outside diameter of the dictaphone tube. I didn't think that would work either, but I gave the job to one of our radar mechanics and he turned out a beautiful little horn about three inches long, made from some shim brass he got from the engineering workshop. It worked like a charm and I proudly presented it to Shorty Dibbs. He didn't exactly say 'I told you so', but I could see he was pretty happy about it.

Then we struck another problem: The batteries on the ferry were always low in voltage and when we played back Shorty's comments with full batteries in the evening, even at the slowest speed-setting on the dictaphone he rattled on in a high-pitched voice that you couldn't possibly understand. So it became my job to sit at the dictaphone with my thumb on the cylinder mechanism as a brake, and try to get the speed right so that it sounded like Shorty and you could understand what he was talking about. In a long session my thumb would start to warm up and I would have to take it off the cylinder and suck it. This meant that W/C Dibbs turned into Donald Duck until my thumb had recovered. In the meantime the crews were rolling around the floor laughing and Shorty, who took it very well, was urging me to hurry up.

Don Richards

Part 2 of Don's memories will appear in the next issue of Radar Returns

31RS, DRIPSTONE CAVES

On 7 November, 1941, just one month before Pearl Harbour marked the beginning of the Pacific war with Japan, the Australian Government's War Cabinet decided that radio air-warning stations should be set up at 32 locations around the Australian and New Guinea coasts and that the RAAF should be responsible for them. Immediately after Pearl Harbor, furious activity at the CSIR Radiophysics Laboratory (RPL), led by Dr J H Piddington, resulted in the modification of already available Army shore defence equipment to produce a 'rough' but effective experimental air-warning set which was installed at Dover Heights, operational late on 12 December and, manned by the Army, provided air warning for Sydney for some months.

The Australian Academy of Science Memoir on Dr Piddington reports that the following week "there was a crash program at the RPL, assisted by several RAAF radar mechanics, to produce three pre-production models by the end of January 1942." As each was completed it was handed over to the RAAF for deployment.

Decisions were made to keep the first unit for experimentation, send the second to Darwin and the third to Rabaul. We are here concerned with the second, which became 31RS; the third proved too late to go to Rabaul and was installed as 29RS near Port Moresby, while the first had been installed in an Army blockhouse at Port Kembla.

Ed Simmonds has reviewed the considerable body of written material which purports to present the history of the installation of 31 Radar Station and its part in the defence of Darwin against the early Japanese air raids.

Editor

Having read many documents relating to the early days at 31RS I now believe that some of the published words on this facet of Australian radar history, often regarded as authoritative, are factually incorrect. One has to remember that in times of crisis the human psyche looks for a scapegoat. People try to protect their backs. Cover-ups are common. This reassessment of the position relating to the first raid on Darwin and the first operational success of RAAF radar at Dripstone Caves on 22 March 1942 has been based on primary sources, the reports on the public record of those people who were part of the scene at the time.

.....

In September 1941, RPL was authorised by a decision of the War Cabinet to design a long-range air warning set. However, apathy in 'high places' including the War Cabinet itself, together with a shortage of suitable valves, probably hampered their efforts because nothing happened until early December. In the meantime, the RAAF had been given responsibility for setting up and operating an air-warning system by a War Cabinet decision of 7 November.



31 RS at Dripstone Caves, circa 1942

Then, on Sunday 7 December 1941, Japan attacked Pearl Harbor. Dr J A Piddington, who was in charge of the ShD project, was galvanised into action and, with a team of a dozen or so RPL staff, started to modify the ShD set for air warning. On the evening of 12 December, "a very 'haywire' experimental air-warning set" with a brilliantly innovative bridge-type time base was installed at Dover Heights on a 36-element ShD array already in use; it detected aircraft at distances that established its feasibility and was operated by the Army in the defence of Sydney for many months.

On the following day, W/Cdr A G Pither inspected the installation. At that stage, No. 1 Radio School was the only unit under his command. He used it to seek funds to have three experimental prototype sets built by RPL; the number of sets was guided by the availability of valves. He ordered that the British CD/CHL set which had been held by RPL should be installed at Shepherds Hill near Newcastle and that became the first RAAF operational air-warning radar on 10 January 1942.

Pither at that time believed that no Australian-made equivalent of the COL-type equipment would be any more than a stopgap. He proved to be spectacularly

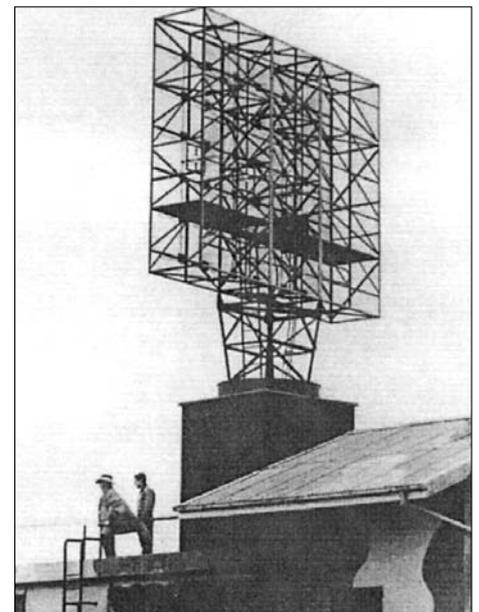
wrong when the LW/AW was successfully deployed in the field.

On 24 January 1942, RPL reported that the first unit was finished but it is not clear whether this included the AW aerial. It was sent to Port Kembla for installation there. On 28 January, Pither went to Darwin to select a site. He also arranged with Mr Stoddart of the Allied Works Council for the construction of a suitable building; this was promised for early February.

Two officers, P/Os Harry Hannam and Bruce Glassop, fresh from the first ground radar course for officers, and three mechanics, AC1s Bill Couper, Bill Wellstead and Errol Suttor, directly from the second ground radar mechanics' course, left for Darwin on 3 February by rail to Brisbane thence by Qantas, arriving on 5 February.

The second RPL unit was handed over to the RAAF on 4 February and was taken to Richmond for shipment to Darwin. A Douglas DC2 transport aircraft was made available for the task. AC1 John Scott, another mechanic from the same course, was detailed to help with loading and to accompany the equipment on the flight to Darwin.

S/L (then P/O) John Norrie, Bill Harnath and Errol Suttor all reported that the aerial had to be cut into smaller pieces so that it could be loaded through the doorway of the DC2. RPL had overlooked the fact that the ShD aerial had not been designed for air transport. Its size and weight were such that three aircraft loads were needed. The first load arrived on 9 February and the last,



A CD Radar aerial of the type used by 31RS in 1942

31RS, Dripstone Caves (cont.)

accompanied by P/O Fred Hull, reached Darwin on 21 February.

Re-assembly of the unit began at Dripstone, probably on 10 February, under the supervision of P/O Hannam. By 19 February, when the first Japanese air raid struck Darwin, the equipment was installed, but the aerial was still lying on the ground awaiting the final components which were coming on the flight with P/O Hull.

The unit was woefully under-resourced. Great difficulty was experienced in lifting the aerial into position, for which purpose the RAAF had not provided any lifting gear. A pole, pulleys and rope were scrounged but the rope broke, damaging both the aerial and the building. An appeal to the US Air Force resulted in a mobile crane being sent to lift it into position. Similarly, no source



A/Cdre A G Pither unveiling the RAAF Radar Memorial Plaque at Dripstone Caves, Darwin, 19 February 1967

of power had been supplied; another appeal to the Americans resulted in a small power unit being provided. However, it proved inadequate and another was found which could be nursed along for a few weeks until a diesel unit and fitter arrived.

Finally, there were great difficulties in matching and phasing the antenna array. With no manuals and no experience in using the impedance measuring set ('bugger bar'), the technical staff tried everything they could think of without success. Finally, P/O Hannam appealed, through the RAAF, to RPL and on 1 March or thereabouts Dr Piddington and Dr Brian Cooper arrived on site. They found that the wrong coaxial cable had been supplied and this took a few days to be replaced. Then they matched and phased the aerial and the unit was operational on 22 March 1942. The first enemy air raid was detected by 31RS on that day.

Dr Piddington was bitter because his 'innovation' [my choice of word] was not operational on 19 February. The following is a summary of Dr Brian Cooper's statement relating to the time when he accompanied Piddington to the site in March 1942:

- RPL knew that the aerial had not been erected at the time of the first raid.
- It said that the RAAF mechanics were at RPL to assist in the construction of the prototypes, not to familiarise themselves with the AW as stated by Evans. This was confirmed by the late F/O Frank Bound who was one of the RAAF at RPL.
- It also stated that Mellor had trivialised the efforts of the RAAF personnel in his work and went further to say that Dr Piddington was directing his 'ire' at the senior RAAF officers, not the men. His major complaint was that W/Cdr Pither had sent "partly trained and inexperienced officers" to the remote and isolated site.
- The major effort of the RPL men was to match and phase the aerial using the IMS.

Certainly, W/Cdr Pither had nothing but 'partly trained and inexperienced officers' to choose from, though he may not have selected the best one available to install the unit. In retrospect, I believe that F/Lt Fred Hull (then a recently commissioned P/O and completing his course at No 1 Radio School, Richmond) would have been a better choice as he had worked previously on high-frequency radio with the Royal Flying Doctor Service. Later, he was able to match

and phase the aerial at Merauke without using the 'bugger bar'.

Mistakes made by the RAAF have already been mentioned. No power supply accompanied the set and no arrangements were made for lifting the heavy aerial. P/O Hannam, who was put in charge of the installation, needed help from the American Air Force to find a power supply and a means to erect the aerial. In addition, no instruction manuals for the AW or IMS had been supplied. The bureaucracy of RAAF Darwin was not at all interested in this new-fangled thing and virtually ignored the station, RPL and Dr Piddington.

Despite Dr Piddington stating on several occasions that he would have been able to have the set on air on the 19th February the above timetable of events shows that he would have not been successful.

The 'top brass' in Darwin took no notice of a radio message from Fr McGrath, a Bathurst Is. missionary, that the Japanese were on their way, so can anyone be sure that the same people would have been more aware of a similar report from 31RS had it been 'on air.'?

It is unfortunate that this event was the start of animosity between RPL and the RAAF but there were faults on both sides.

In summary:

- RPL failed to appreciate the fact that the AW aerial and tower were not designed to be transported by air. I think that Dr Piddington over-reacted.
- W/Cdr Pither may possibly have selected the wrong officer to install 31RS but he had no officers who had trained on or even seen an AW or an IMS beforehand.
- The RAAF may have failed to take advantage of the offer by RPL to assist in the establishment of the station, but this had no effect on the outcome on 19 February 1942.
- None of the RAAF mechanics who assisted in the manufacture of the prototypes at RPL and who would have had some knowledge of the AW were included in the installation party.
- The RAAF bureaucracy in Darwin appears to have had no prior understanding of the purpose of the unit nor of the part it could play in the defence of the city.

Ed Simmonds

346RS Goes to Bundralis

346 Radar was one of five RAAF radar units that took part in the invasion of the Admiralty Islands by the American 1st Cavalry Division early in 1944. The units, 337, 345, 346 and 347RS, were to provide radar coverage for the operation with the Australian-designed and built LW/AW equipment. This was the only suitable light-weight equipment in existence - there was no American equivalent.

Radar coverage for the initial assault was provided by 340RS located on Bat Island south of Manus Island. This unit had to be evacuated after only a few weeks when scrub typhus infected most of its personnel, several of whom died. The four remaining units went to Los Negros Island. 337 arrived first and was installed near the Momote air strip, becoming operational on 28th March 1944. On 19th March 345, 346 and 347 were landed by LCM barges at 'Red Beach' on what had been Salami plantation where they staged pending clearance of Japanese forces from their proposed sites. 347 moved to Mokerang Point and became operational at 1900 hours on 4th April. Bipi Island was chosen as the site for 345RS and that unit was transported there by two LCMs on 6 April; it became operational on 10 April. A site had still to be chosen for 346RS.

On 14 April, advice was received that the Americans had cleared Japanese from areas proposed for their siting. A siting party departed from Hyane Harbour on board RAAF crash boat 0310 to inspect possible

sites at Ahevos Point and Bundralis Mission on the north coast of Manus Island.

The party included S/L Thurston, F/ Lt W Thompson, P/O John Harris, (CO, 346 Radar), Cpl Eric Olsen (telegraphist, 346RS), LAC Noel McCormack (radar mechanic, 346RS) and a force made up of RAAF guards and American troops.

The party first visited Ahevos Point. This was an excellent site for a radar but difficult to access with equipment. The night was spent ashore at Ahevos Point but a severe storm during the night caused the launch to drag its anchor and run aground on the beach. The next morning, having ensured that the launch was undamaged, it was refloated and the party continued on to inspect Bundralis; it was chosen as the site for 346 Radar.

P/O Harris returned to Los Negros on 19 April to organise the move of 346 to Bundralis. LAC McCormack, Cpl Olsen and the guards remained at Bundralis. On that night an attempt to infiltrate the site by Japanese was frustrated by the guards. This was the first of several unsuccessful Japanese attacks on the unit.

An installation party from 41 Wing arrived on 23 April, followed next day by the installation officer, P/O Cedric Zahara, and the remainder of the 346RS personnel and installation began. The unit became operational on 28 April at 2002 but BL4 installation was not complete as the A9 test set had been supplied without valves and none were available.

The next day a fire, of unknown but suspicious origin, destroyed the doover tent; the equipment was undamaged and the tent was replaced with a thatched native-type hut.

On the following day, 30 April, at about 0130 hours, three Japanese were sighted advancing up the hill behind the radar installation which was situated at an elevation of 150 feet and some 300 yards by trail from the camp site on the beach below. The guards fired several Tommy-gun bursts at the enemy, who answered with rifle fire. The radar was closed down and a signal sent to 114 Mobile Fighter Sector for assistance. Personnel, including the five at the radar site, were placed on full alert and remained so until the arrival of 77 American infantry by landing barge at 1000 hours. The presence of Japanese was confirmed but they had apparently over-estimated the unit strength and withdrawn after the initial exchange of fire. During the initial occupation of Bundralis, 18 American infantrymen had been attached to the unit for protection, making the total number of personnel on the isolated unit only 52 at the time of the attack.

Of the five radar units involved in the Admiralties campaign only 346 and, to a

lesser extent, 345 were vulnerable to enemy attack. The only access to Bundralis was by barge; there were no negotiable tracks or roads into or out of the place. The prevalence of reefs in the area meant that the barge journey could only be made during daylight hours so the unit was isolated and vulnerable to enemy attack. Many Japanese troops remained free in the mountainous, jungle-clad interior of Manus behind the unit. However, the unit operated there only for about a month before it was withdrawn to Momote for operational reasons. Two months later it returned to Bundralis, where one more episode of enemy activity was encountered.

Noel McCormack

BAILEY BOYS

In 1941, Britain was urging Australia to provide it with trained technical officers and mechanics to help meet the needs of the RAF in its battles with the Luftwaffe, and our government agreed to set up appropriate training facilities. In May of that year, W/Cdr A G Pither had become responsible for RAAF radar matters and one of his first concerns was to organise these training facilities. With assistance from the Radiophysics Laboratory, which provided some basic training to the founding staff, he set up No 1 Radio (later Radar) School at Richmond, NSW, in July 1941, and arranged with the RAF for an experienced officer, S/L A E Mitchell, and three sergeant radar mechanics to be sent to the School as soon as possible thereafter, along with a CD/CHL radar set for instructional purposes. The first officers and mechanics to pass through the School were 'direct entries', people with technical radio training in civilian life. Training of radar operators began at the School in January 1942.

Meanwhile Pither had approached the University of Sydney and the Melbourne Technical College (later RMIT), making arrangements for those institutions to provide basic theoretical and practical radio training respectively for prospective officers and mechanics. He visited the Universities of Sydney, Melbourne and Queensland, speaking to gatherings of second and third-year engineering and science students about opportunities in 'radio location' in the RAAF, inviting applications and explaining that the successful applicants would be commissioned, with many of them being sent overseas to work.

Professor Victor A Bailey of the Sydney Physics School was chosen to head the project and, with a small but talented staff, designed a 6-month intensive course of radio physics. The first intake of some 45 young men, ranging in age from 18 to 27,

was recruited and began their course on 15 September 1941. Most of them completed the course in February 1942 and, after an administrative course in Melbourne, were commissioned as Pilot Officers and posted to Richmond to take officers' courses in ground or airborne radar. These people came to be known as 'Bailey Boys', and were the first of five such courses to be offered during the period September 1941 - November 1943 to meet the basic training requirements for radar technical officers in the service. The second course began in March 1942, with subsequent courses overlapping one another and beginning in August, October and December 1942.

The nature of recruitment changed as each course was mounted. Courses 1 and 2 were comprised mostly of university undergraduates in engineering and science, with Course 3 including a higher proportion of older people including graduates from other disciplines. Entries directly into Courses 4 and 5 were all from such older people. This structure is reflected in the average ages at commissioning: Course 1: 20.4 years; Course 2: 21.2 years; Course 3: 23.1 years; Course 4: 24.1 years; and Course 5: 27.5 years. In all, some 140 men became radar officers through the Bailey scheme, and represented almost half of all the wartime radar officers.

Those who completed ground-based courses at Richmond were in almost all cases called on to take command of ground radar units. Many of them were required to assume these responsibilities at a very young age. One appears, from the available records, to have been commissioned soon after he was 18 and held a command before he was 19; seven, including him, were less than 20 when posted to command and a total of 25, possibly more, were less than 21, with quite a number not much older. These were all people who must either have matured very quickly or underperformed in the roles to which they were assigned. It says something for the adaptability of youth under pressure that most seem to have coped, in some cases brilliantly.

The officers concerned with airborne radar in most cases worked closely with aircrews and were often subject to the same dangers. Through their work they were able to make significant contributions to the safety and effectiveness of the crews concerned.

Warren Mann

RADAR PLAQUES

In recent years, there has been a quiet but effective program of marking significant radar sites with commemorative plaques. I recall seeing the first at Newcastle during the BLIPS reunion in 1995. It was on the blockhouse at Shepherds Hill, and it was

followed by an equally impressive plaque on the concrete igloo at 131 RS, Ash Island in the Hunter River, where our Editor had been CO - and found romance.

Since those well-patronised days, there has been a succession of plaques and, as our stations were sited across Australia from south to north and from east to west, so the radar plaques have followed, sixty-odd years later. They can be found from Wilsons Promontory to Dripline Caves, which surely is the most significant of the now considerable number. Victoria, Western Australia and NSW have made the big efforts, though other states have contributed.

The following list has been compiled with the help of Ed Simmonds and Len Ralph, though we are relying to some extent on our veteran's venerable memories so there could be others that we have forgotten:

Dripline Caves NT (31RS); Shepherds Hill NSW (unnumbered); Ash Island NSW (131RS); Burrewarra Point (Moruya) NSW (17RS); Wilsons Promontory Vic (14RS); Townsville Qld (various); Kalumbaru WA (317RS); Albany WA (35RS); Rottnest Island WA (32RS); Cape Jervis SA (10RS); Truscott NT (134RS etc); Darwin Cenotaph NT (various); West Montalivet Island WA (344RS); Richmond NSW (1Rad Sch, etc); *RMIT (Melbourne Technical College) Vic (radar mechanics); Australian War Memorial ACT (WWII radar); Memorial Grove ACT (WWII radar); *Point Cook Vic (radar mechanics); *Cape Otway Vic (13RS). (* to be installed in 2006)

Several other locations are under consideration.

Morrie Fenton

WEDGETAIL DELAYED

Defence projects, especially the big complex ones, have a habit of dragging on long past the estimated times for their completion - remember the F111? Unfortunately, the Wedgetail AEWAC project shows signs of following this pattern.

At a recent meeting of the Minister for Defence with Boeing senior management in Washington, D.C., Boeing confirmed that the Wedgetail project has slipped behind schedule. Until recently, the company had been advising that the project was running well and achieving significant success for one of such complexity.

The extent of the delay will be determined by intense project reviews over the next two months. Accepting responsibility for this situation, Boeing has given a commitment that whatever is necessary to bring this project to a successful conclusion will be done. The company has been asked to provide a validated and revised schedule for

the project. The contract with Boeing includes a provision for liquidated damages and the government is reserving its contractual rights in this regard.

Boeing has appointed Ms Maureen Dougherty as the new project manager. She is claimed to have an excellent track record in managing major aircraft projects including the F22 Raptor for the USAF. Let's hope that she can retrieve the situation.

*Based on press release,
Department of Defence*

POSTWAR RADAR

A substantial number of the readers of *Radar Returns* have service in the RAAF since September 1945 in functions closely concerned with the rapidly developing technology and application of the principles upon which WWII radar activities were established. Not only have these people been engaged in the passive defence of the integrity of Australia's borders, but many of them have found themselves actively deployed in activities deemed to be relevant to the country's defence.

In those now more than sixty years, the RAAF has served, probably almost continuously in many places in the Far East, the Middle East and the Pacific. The political justification for these activities has not always been universally accepted by the Australian people but, for those in the service, they have been jobs to be done. It can be assumed that, over that period, the involvement of radar in the functions of the RAAF has become increasingly important as well as technically complex.

As was the case during WWII, the detail of radar-related activities has not been widely publicised, and most people, including most of those with some RAAF radar background, wartime or later, have little if any comprehension of the scope or nature of that involvement. What part, if any, did RAAF radar play in Japan, Malaysia, Korea, Vietnam, etc? What has been the progression from the LW/AW to JORN and AEWAC? I am aware that some efforts have been made to record and disseminate the highlights, but very little of it has been widely available.

The history of radar in Australia can be seen as beginning in 1939, just before the outbreak of WWII, and moving only slowly until 1941. In May of that year, W/Cdr George Pither took charge of a Section in the RAAF which in the following year became the Directorate of Radar and, for those of us involved, the rest has become our history.

However the history of the development of radar in WWII had little coherent form in the minds of those involved, let alone in the

broader community, until the activities of Ed Simmonds, Norm Smith, Morrie Fenton and later Pete Smith over a ten-year period from the late 'eighties. *Radar Returns*, now in its eleventh year, has been a factor in promoting a wider interest in and understanding of RAAF radar in WWII; it seems to me that it should extend that role to help throw light on the postwar period. That is the reason that I am proposing to devote a portion of the newsletter to postwar radar, not large at this stage but, I have no doubt, destined to grow. I would be delighted to see the emergence of a group analogous to Simmonds *et al* from those who have had involvement in RAAF radar since September 1945.

I am fully aware that the analogy cannot be pushed too far. There is a crucial difference in outlook and culture between wartime radar people and those who have been involved since. We had responded to a desperate national emergency and volunteered in the hope that we might make some contribution to overcoming it. In substantial numbers, we diverted from a wide range of civilian career paths to do that. But very few of us were tempted or even considered remaining in the Service beyond the "duration of the war and up to one year thereafter" specified in our conditions of recruitment. We were essentially amateurs as service people and in most cases as radar people. But since the war, those who have followed us have had to see themselves as professionals, making a career or at least a significant part of it in the Service. Clearly, that fact will influence the nature of the contributions we get to *Radar Returns*. But it will not change the need for them. There is a job to be done and I, for one, am keen to see it begin.

Warren Mann

7RS REUNION

There were chocolate novelties of all shapes and sizes at the 18th reunion of 7 Radar, Wedge Island, held in April 2006, just a week before Easter, and everyone present won a prize. It was a very happy occasion. At least 40 people were present at the Marion Hotel for a fine lunch and an enjoyable program. John Beiers presided again and CO, Jack Measday, called the roll carefully - and there were no Ack Willies.

The Guest Speaker was Terry Arnott, from the SA Department of Environment and Heritage, who explained how WW2 defence sites in SA were being heritage-listed. The reunion ended, as usual, with a celebratory cake and group photos.

Despite some misgivings, the organiser again accepted the task for next year, the feeling being that the Wedge reunion was too popular to drop.

Morrie Fenton

THE RR WEBSITE

Our website, radarreturns.net.au, is up and running, though by no means yet in finished form. Work is continuing and various features are almost ready for final incorporation. At that stage, probably by the time you have this newsletter, you will have available to you the following sections:

Units: a database of information on each of about 230 WWII radar stations (including some that were planned but never became operational) and associated units (fighter sectors, RIMUs, radar wings, etc), giving for each the type of unit, formation and disbandment numbers, the type of equipment, a listing of significant events (with dates), a list of commanding officers (with dates) and some notes on the significant events (where appropriate). This feature is already available. It has been developed from a database established by the late W/Cdr (Ret'd) Pete Smith and, although it is based on surviving A50 Unit History Sheets and is a lot more reliable than anything else that is available, it is certainly neither complete nor error-free. In the months to come we will be editing it to correct any mistakes we can identify. We would, of course, be most grateful to have notes on any glitches you may find.

There is also a database of Commanding Officers, showing for each the units they commanded with dates and the dates of changes in their rank. The two databases are interlinked.

Newsletters: a copy of the most recent issue of *Radar Returns*, and a browsable archive of all previous issues back to the first one in November 1995. In due course, it will be made searchable.

Guestbook: a facility by which you can enter short comments or notes which will then be available for other visitors to the site to view and, if they wish, respond to.

Links: a collection of links to websites that we judge may be of interest to our readers; click on these links and you go direct to the website concerned.

Plans are in hand to add

Faded Echoes: brief death notices of people involved in or with radar and associated units which will be entered as they become known to us, then removed when they appear in the Faded Echoes section of a published issue of *Radar Returns*.

Publications: a facility by which we can publish on the website contributed and other material which, although too long or otherwise inappropriate for inclusion in the printed version of *Radar Returns*, may be judged as of likely interest to the readership or to sections of it.

As time goes by, there will undoubtedly be other material of value to our constituency which will be included on the website. We would welcome suggestions on this or on any aspect of the project

Editor

STATE ASSOCIATIONS

VICTORIA

The Victorian RAAF Radar Association is well advanced in its plans to have commemorative plaques installed at RMIT, Point Cook and Cape Otway and hopes to have them all in place before the end of this year, despite the need to have the approval of various bureaucracies, including the RAAF and the RMIT University.

The dedication of the first plaque will take place at the site of the wartime 13RS, near the lighthouse at Cape Otway, on Saturday, 19 August 2006 at a time yet to be fixed. A number of people have indicated that they would like to be present for the occasion and some plans are in place for accommodation, most of it in Apollo Bay, and transport to the site. Bookings should be made promptly, as arrangements will depend on numbers proposing to go. Further information is available from Peter Yeomans, 03 9589 3970, or Len Ralph, 03 9337 8272.

No definite arrangements have yet been made for dedication ceremonies for the plaques at RMIT and Point Cook.

The annual luncheon will be held in the ground-floor restaurant at the Rosstown Hotel, 1084 Dandenong Road, Carnegie (cnr Koornang Road) on Tuesday 15 August at 1200 for 1230 hrs. Numbers need to be known in advance and bookings may be made with Alex Culvenor, 03 5476 2288, from whom also further information.

QUEENSLAND

The June meeting of the recently reconstituted Queensland RAAF Radar Association attracted an attendance of 20 or so, despite a spate of injuries and illnesses among regular attendees. There is every indication that the group has successfully negotiated the change and that it will continue as an important focus for the radar veterans of southern Queensland.

NEW SOUTH WALES

The unveiling and dedication of the radar commemorative plaque at the RAAF Memorial Grove in Canberra proceeded successfully on 22 March, attended by a group of veterans from NSW, Victoria and South Australia, supplemented by serving members of the RAAF and members of the ACT Division of the RAAF Association.

At the Annual General Meeting of the Radar Air Defence Branch, RAAFA NSW Division, on 24 March 2006, the following

Committee for 2006-7 was elected: President, Walter Fielder-Gill; Senior Vice-President, Jo Dunbar; Vice-President, Tom Bond; Secretary, Howard Campbell; Treasurer, Malcolm Le Bas; Members: Norma Bond, Stan Burge, Bette O'Donnell, Shirley Brettle, Terry Delahuntly, Ed Simmonds (Branch Historian), Alex Culvenor (Victorian Representative) and Ray O'Donoghue.

PUBLICATIONS

DARWIN'S BATTLE FOR AUSTRALIA Rex Ruwoldt

My attention was drawn to this book by a review in *Reveille*. Possibly I was attracted to it by the fact that I served in that region. However, this did not detract from the value of its contents, which are drawn from those who were part of the action. This is the feature that impressed me in the beginning. In other words it is a veterans' version and is not an official history written by paid academics or journalists, based on official files held by the authorities.

The aims and objectives of the Darwin Defenders are excellent and they should apply to all Australians.

The book will largely appeal to those who are interested in what occurred in the individual units rather than radar stations as it only deals briefly with 31RS and unfortunately it displays the wrong type of equipment – a Mk. V CHL instead of an AW. However, it recognises the fact that the station was not operational at the time of the first raid on Darwin. The book contains a lot of statistics, one of which enabled me to complete the one point in the Chamberlain Report which we could not interpret in the lousy photocopy supplied by a friend in the UK from which we had to copy it.

This book is thoroughly recommended. It is available from its author, Rex Ruwoldt, who is Honorary Secretary of the Darwin Defenders 1942-45 Inc, at 73 Bay Shore Ave, Clifton Springs, Vic 3222 (telephone 03-5253 1754), price \$30 plus \$9 P&P.

Ed Simmonds

A LAST WORD

There is only one solution if old age is not to be an absurd parody of our former life, and that is to go on pursuing ends that give our existence a meaning - devotion to individuals, to groups or to causes, social, political, and to intellectual or creative work. ... One's life has value so long as one attributes value to the life of others, by means of friendship, indignation, compassion.

Simone de Beauvoir, 1908-86