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COVER



Australian airmen served and fought in many campaigns during The Great War 1914-1918, in the Australian Flying Corps and the Royal Flying Corps, in UK, the Western Front, Mediterranean and the Middle East. AFC squadrons provided a distinctly national contribution to the war in the air.

The cover depicts Airco DH-5 Scouts of the No 2 Squadron AFC over the Western Front

and Bristol F-2A fighters of the No 1 Squadron AFC overflying a crashed German Albatross in Palestine. The AFC operated four combat squadrons in The Great War, 1SQN in Egypt and the Sinai from April 1916 and 2SQN, 3SQN and 4SQN on the Western Front. Four AFC training squadrons were formed in UK in 1917, effectively replacing CFS at Point Cook as the source of trained airmen for the squadrons.

The cover displays two of the many paintings Norman Clifford has completed on the AFC in the First World War. In addition, he has also compiled a history of combat operations, technical details and training notes/summaries, unique to the history of the AFC in The Great War. This history is due for publishing before January 2016, 100 years since the formation of No 1 Squadron AFC in January 1916. Cover: Phil Crowther. Photos: Norman Clifford

FEATURE

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The AFC in the Great War	12
The Astro Compass	17
The Joint Strike Missile	26
My Neptune Days	32
F-111A Training Missions to Remember	37

REGULARS

National Council	10
Air Force Today	19
History	42
Australia Air League	47
Briefing Room	48
Veterans Information	52
Divisions	57
Books in Brief	59
Vale	61

CLOSING DATES FOR MATERIAL

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RAAF links endure at Canberra Airport

Sir Frederick Scherger, the first RAAF officer to become Chief of Defence Staff and be promoted to the four star rank of Air Chief Marshal has been honoured at Canberra Airport with the renaming of the main thoroughfare into the Fairbairn precinct to Scherger Drive.

"It is important that we sustain the both the historical and contemporary links between Canberra Airport and the Australian Defence Force," Canberra Airport Managing Director Stephen Byron said.

"We are delighted that the current Chief of Defence Force, Air Chief Marshal Mark Binskin joined us to preside over the ceremony naming Scherger Drive."

ACM Binskin said during his flying days 'Scherg' was widely regarded as the RAAF's most outstanding pilot.

"He was awarded the Australian Flying Cross in 1940 for his exceptional service as a pilot and flying instructor. He was one of the few Australians to command American Air Forces and later, British Commonwealth Forces and brought significant operational experience to the role of Chief of Air Staff. After his retirement from the RAAF he headed the Australian National Airlines Commission and the Commonwealth Aircraft Corporation.

"It is fitting that a road in the airport precinct in our nation's capital will now bear the name of a man who played such an influential role in Australia's military and civilian aviation history."

Mr Byron said: "Scherger was something of a trailblazer – an exceptional airman, highly decorated and later an astute leader and quite visionary in his contribution to defence acquisition and strategic policy development.

"There couldn't be a more appropriate person to honour here at Canberra Airport and it adds to our close ties with the RAAF in particular and Defence and industry more broadly."

Some of those ties include: Canberra Airport funding the upgrade of the RAAF Memorial Grove in Canberra and a memorial site at Fairbairn; the naming of the David Warren Complex at Fairbairn in honour of the inventor of the black box flight recorder; sponsoring the Australian Business Defence Industry Unit (ABDIU); and sponsoring Air Force Rugby League and The Long Ride (a Defence motorcycle event raising money for Prostate Cancer, in which CDF participated last year).

"Canberra Airport's links with Defence are wide and deep. We are located at the geographic heart of defence decisionmaking in Canberra – 15 minutes from Parliament House, less than 10 minutes from Russell and Campbell Offices, and 20 minutes from HQJOC – and Brindabella Business Park is Canberra's defence industry hub where defence and industry come together with Department of Defence offices alongside those of the likes of Raytheon, KPMG, QinetiQ, Airbus Defence, Mediaware, and Cisco to name a few.

"Our biennial Open Day welcomes a large Defence presence typically including a hot air balloon, Defence Force Recruiting stand, Hercules aircraft on display, and an F/A-18 flypast.

"We are the only capital city airport in Australia to enable the community to get 'up close and personal' with these aircraft, free of charge, and thousands flock to the precinct to participate," Mr Byron said.



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President's Message

The One Day of the Year

With the recent 100th Anniversary of ANZAC Day it is apposite that my President's article for this edition of Wings reflect on this special milestone in our history, not from the perspective of documenting the events that occurred at Gallipoli a century ago, but to reflect, from my own experiences, on what this day of commemoration might mean to the Australian psyche.

When Alan Seymour wrote his controversial play about ANZAC Day - The One Day of the Year - back in1958 it was banned lest it offend the veteran community despite being more a family drama than an attack on the traditions of ANZAC. It was highly successful despite its controversy and after one such production in 1970, Katherine Brisbane reviewed the play and observed that in ten years' time no one would find the play controversial. She made that prediction in the context of an Australian Society increasingly challenging its beliefs and mores at a time of immense social upheaval. She felt Australia was in the throes of distancing itself from traditions such as ANZAC. She was proved correct in that the play has lost its controversy and is now particularly held in high regard for the strength of its characters - a key hallmark of a good family drama - but we are left to ponder, with some considerable irony, the way Australians have changes since that time, and become more conservative, as being behind the way the play has come to be viewed.

My own experiences have tended to mirror these developments in the manner in which Australians approach ANZAC Day. My earliest memories go back to my sub-teen years in the mid-1950s. We lived over the road from the local RSL Branch and I have fond recollections of accompanying my father, a 2/27 Battalion digger, to night cricket games there and of proudly watching him turn out to march with his mates come April the 25th each year.

I was drawn more and more into the traditions of Australia's military history as I prepared for, and then commenced, my own career in the Royal Australian Air Force. ANZAC Day for my family and me was an integral part of our lives through the years as other Australians seemed to be walking away from it. Wherever we resided ANZAC Day lived deep in our hearts. In regional/rural areas we joined entire towns commemorating the sacrifice of those who fell or were wounded and their families, while in capital cities we were warmed by spirit of the dawn service and then joined in the state or national major commemoration. We were very much aware of the then increasing view in the broader community that ANZAC Day falsely promoted the notion that we owed our nationhood to a nineteenth century concept that it can only be born through the spilling of the sacrificial blood of our young - but spiritually we simply ignored these sentiments and continued with our lives.

Along the way there was one particular happenstance that Wings readers might find interesting. Over the period 1983-1986 I held the appointment as Military Secretary to Sir Ninian Stephen, the Governor General of the Commonwealth of Australia, and during that period the then Archbishop of Canterbury, Dr Runcie, came to stay at Government House as part of an official visit to Australia during which he was to address the Dawn Service gathering at the Australian War Memorial on ANZAC Day.

Concern had been expressed that the Archbishop's pacifist leanings might lead him to render a controversial address and it fell to me to gain a sense of what he might say whilst we were all gathered at an official dinner on ANZAC Eve. Some earnest discussions with Terry Waite, Adviser to Dr Runcie and who was later to become well known for his success as a hostage negotiator, rendered a copy of the Archbishop's address. A brilliant, balanced missive that warmed the hearts of all attending the Service early next morning.

Decades on, the spirit of ANZAC shines more brightly than it ever has in the Australian community as reflected by the record crowd of 100,000 whom attended the 100th Anniversary ANZAC Day Dawn Service at the Australian War Memorial in Canberra last April. The National ANZAC Day Commemorative Service that followed a few hours later featured the same spirit and gave special poignancy to our bonds with New Zealand.

But it was an event that occurred the Sunday before ANZAC Day this year that, for me, provided an even more penetrating insight into the manner in which Australians look upon our military history. My local RSL Branch in the seaside suburb of Semaphore organised for a short march setting off from the nearby 'military road' to finish on the Esplanade where a brief commemorative service was held. Pipes and drums accompanied the marchers but it was their order that made the day. Just three sections of marchers; leading off were relatives of First World War veterans wearing the medals or carrying photographs of their kin, then followed serving or ex-ADF members with the relatives of serving or ex-Australian military personnel bringing up the rear. The effect was inspiring. The invitation to march as group honouring their relatives who had served in the Great War acted as a catalyst for family reunions that brought together the different family ancestry lines that had evolved in the last 100 years. The children, nephews and, nieces of the World War I veterans and their following generations came together in a way most had never done before and many families held picnics or other events before or after the march and service.

Family, mates, community and country – a bond made imperishable by the courage and sacrifice of the men and women who have served in the defence of our nation especially at war. Lest we forget.

Brent Espeland

National President

Australian Flying Corps and Royal Australian Air Force Association

Post Script: Terry Waite himself was taken hostage and spent seven years in captivity before being released. His story of that time is expertly captured in his book Taken on Trust.

National Council

Sale War Cemetery, 1/10/2014 LISTEN TO THE STONES

When you quietly move among us don't let your teardrops start This is not the time or place for a broken heart For while we rest here below and you lament above Our memory is forever hallowed in this, the land we love. And we are not as silent as you may think we are Just listen to our stones as they whisper from afar They speak of better things than all the sorrows past And keep alive our stories. That's all we've ever asked. Make sure you remember the fight for Freedom's cause The path-finding of ways to end the worst of wars. Here we rest content, with duty done and knightly virtue proved Our pilots are all safe now and so are those who crewed. We placed our lives in the hands of Fate without the least demur

Pray go and tell Australia that we died for her¹.

¹ The final line is taken from the inscription on the memorial stone to Sergeant Howard Raymond Boys who died on 23/8/1943, aged 24. Other stones which have contributed to this poem honour the lives of Leading Aircraftsman Charles Thomas Epps (5/6/1943, aged 19), Private John Clarence Dobson (5/7/1943, aged 38), Flight Lieutenant Geoffrey Norman Reeve DFC (13/9/1943, aged 28), Flight Sergeant James Archer Layton (19/9/1943, aged 19), and Flight Lieutenant Frank Keith Morcombe DFC (5/10/1943, aged 30).

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Persons who have an involvement or relationship with the uniformed or civilian areas of the Royal Australian Air Force, related industries or activities

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WINGS Winter 2015

Feature

The AFC in The Great War

On 30 July 1914, the British Government alerted the Australian Federal Government, by secret cipher, that war in Europe was imminent. All that Australian citizens knew about Europe was through their only source of information, the newspapers. Many were aware that Europe was seething and that Germany had heavy-handedly entered on Austria's side against Bosnia, and tensions escalated from there.

The 'mother country', Great Britain had entered the war in support of France. To Australians, it was a real shock to observers in the antipodes (Australia); The European cauldron had boiled over.

Finally, on August 4, 1914, conflict began. It became the Great War, the most dreadful in world history to that time. Germany, Austria-Hungary, formed the so-called 'Central Powers' on the one hand. While on the other, France, Belgium, Italy, Russia, Bosnia and Great Britain, became known as the 'Allies'.

A month later, the Ottoman Empire (Turkey) became involved when naval vessels shelled Russian ports, and Russia declared war on them on September 5, 1914, as did Britain and France the following day.

Meanwhile, great waves of patriotism ensued and millions of men of the combatant nations sought to take up arms with which to fight for their country and they swept enlistment centres in an effort to get into the war. Great Britain was not so much in peril, as fighting to correct an injustice. Germany was on the march and had to be stopped.

Although far from the point of conflict, the Australian nation, large in area but small in population, was grossly affected, as was United Kingdom and the other Dominions. Australia, like the other dominions, was poised to follow Britain into battle wherever it might lead them. It was a patriotic cause - with no idea or forecast of the hidden horrors to come.

War historian Charles Bean wrote that many Australians had the fear that they might miss the war 'which might be over before they reached the fighting. 'All the adventurous roving natures that could not stay away because it was a game to be played and they were players by nature, they could not stay away.' The price paid by those who went was equaled by those at home. It was enormous.

Out of Australia's population of 4,000,000 malesⁱ, a total of 331,781 enlisted and left these shores for training in Egypt and/or Great Britain. Of the enlistments, over 60% became casualties. Gallipoli was a costly campaign - and it was just the beginning. In France the price of war was paid in many thousands wounded and killed. As the war progressed, Australian troops learned lessons that turned them into an attack force to be feared.

In Australia, hundreds of young men, impressed by the thought of a flying machine unit, rushed to join the newly created Australian Flying Corps (AFC), established in the Australian Army. Many were captivated by the prospect of becoming a pilot, others sought ground duties; only a comparative few were enlisted. The author has interviewed a number of those

who were in the Australian Flying Corps, and he found that the class of men weren't just eager adventurers, but more like 'the guy next door' - ordinary people responding to a call - with great enthusiasm.

Many Australians, after failing to join military aviation in Australia, travelled abroad of their own volition and endeavoured to enlist in the Royal Flying Corps (RFC). Enlistments were difficult to achieve which led to the British War Office enquiring whether Australia and the other Dominions were prepared to form air units for service aboard.

The Department of Defence and Army chiefs were definitely interested, if they could recruit, and train, enough aviators to meet the requirement. The story of the pioneer air unit, the 1st Squadron (No 1SQN), AFC, began when Australia was the only dominion to respond and, with some difficulty, set about gathering sufficient numbers for deployment to Egypt in March 1916. Ground personnel were no problem, they were made up from army volunteer tradesmen, although few knew what an aeroplane was. Nevertheless, there were many volunteers.



Bristol F-2B fighters of No 1Squadron overfly crashed German Albatross in Palestine. Photo and painting: Norman Clifford

When it became apparent that the Central Flying School flying instruction was insufficient, advice, almost a demand, from the RFC was to 'Send men straight to England', and this occurred with the two squadrons that followed.

There was little choice but continue with more of the same in flying instruction. Courses 4 and 5, enlarged Courses of Aviation, were hurried through, with a reasonable amount of basic instruction for some. The 2nd (Point Cook) Squadron AFC, later to become 69SQN RFC (and 3SQN AFC in 1918), left for England little more than complete in numbers. They were sent 'straight to England'.

The RFC Training Brigade commander was highly critical of the second squadron because he wasn't expecting it to be so completely untrained and criticism even extended to some of the men initially being ' judged medically fit for service'. He demanded a response from the Australian Department of Defence. The 2nd Squadron had no sooner departed than the largest group to that stage, No 6 Course of Aviation, CFS, volunteers moved in - all 26 of them. This group were the basis for No 4 Squadron, AFC. In the haste to get the unit overseas, there was very little instruction. On January 17, 1917, it sailed for England, once again it was complete only in name and numbers of tradesmen volunteers from the army.



DH-5 Scouts of No 2 Squadron AFC. Photo and painting: Norman Clifford

AFC and The Great War 1914 - 1918: To be published January 2016

The *AFC* and *The Great War 1914-1918* tells the story of each air unit from training days until they were in action, and then when the war concluded.

The book describes the aeroplane types, armament, gun-belt round mix, synchronising systems, bomb loading, fighting tactics, and cameos of aerial combat. It tells of battery observation fire; counter battery fire, trench reconnaissance, photography. It tells of low level bombing by No 2 Squadron in its SE5a aircraft, contact patrols, dawn patrols, counter attack patrols, low flying patrols of No 3 Squadron with its RE8's; and No 4 Squadron with its Sopwith Camels - and later with Sopwith Snipes.



2SQN SE-5As at Lille, France

It describes the aerial dueling between single machines, the hard work by the Australian two-crew aircraft during the last weeks of the war, and then the deadliest phase of all, amazing aerial battles involving hundreds of fighting machines.

The story of Australian's four training squadrons is one less known. Like their operational contemporaries, they were extremely effective air units and are described in detail including photographs. The radical system of intensive training originated by Major Smith-Barry, known as the 'Gosport System' of instruction, is addressed also.

For the first time in any historic publication, the 'closing down' of the squadrons at the end of the war is described. Lieutenant General John Monash, Australia's foremost fighting leader, became 'Director-General of Repatriation and Demobilisation'. Under his control, Australian forces and squadrons in England, France and Belgium began the long withdrawal from the UK and various war theatres.

The seven AFC squadrons, three combat squadrons in France and four training units, were well organised and experienced no problems due to the organisational ability of Monash. No 2 Squadron was in France, No 3 in Belgium and No 4 with the Army of Occupation at Bickendorf, Cologne, Germany. All made their way back through France to the port of Havre, crossed the Channel, and, together with the four training units, boarded HMT Kaisar-i-Hind, especially obtained for the purpose, and made the long awaited return trip to Australia, picking up No 1 Squadron in Suez on the way. Also aboard were war brides and other military personnel.

by Norman Clifford

Development of the British Air Service

From Synopsis of British Air Effort During the War

Air Ministry April 1918

On the 5th August, 1914, the British Air Service consisted of a Naval Wing, known as the Royal Naval Air Service (RNAS), a Military Wing, known as the Royal Flying Corps (RFC) and a Central Flying School. The Naval Wing, which was controlled by the Admiralty, comprised an airship squadron recently taken over from the Military Wing, and three aeroplane and seaplane squadrons with a total of 93 machines. The Military Wing, which was controlled by the War Office, comprised four aeroplane squadrons with a total of 179 machines. The two wings had a total combined personnel of 197 officers and 1,647 other ranks.

The Royal Aircraft Factory at Farnborough was mainly engaged on experimental work. The bulk of machines and equipment for the Air Service was supplied by private manufacturing firms.

On declaration of war some additional squadrons were hastily formed by the RNAS from all available resources in the country, and certain cross-channel and other vessels were chartered and converted into aircraft carriers. Two squadrons of aeroplanes manned by the RNAS were sent to Belgium with the naval Division to attempt to defend Antwerp, and the aircraft flown from the carriers undertook the protection of the ship channels off the East Coast of England from mine laying, and made attacks on the German Fresian Coast.

The squadrons with the Naval Division constituted the nucleus of the force which was later formed at Dunkirk, under naval control, for the attack of the bases as Zeebrugge and Ostend. The employment of the small aircraft carriers originated the practice, since largely developed, of carrying aircraft in menof-war, in lighters and in special large aircraft-carrying ships attached to the Fleet.

At the same time, all pilots and machines of the Military Wing, available for service overseas, were mobilised and concentrated at Dover and on 13th August 1914, four

Feature

squadrons (56 machines) of the Military Wing, accompanied by an aircraft park, proceeded to France. The machines landed at Amiens, flew to Maubeuge, where there was an aerodrome, and at once commenced work in co-operation with the British Expeditionary Force.

These squadrons played their part in the retreat from Mons and suffered heavy casualties both in personnel and machines. but with the advance to Aisne, sufficient reinforcements were sent out from home to make good the wastage and to permit expansion, so that by the end of November 1914, there were six squadrons in France, which were then divided into two wings, each of three squadrons. This wing system of organisation was continued and as further squadrons were sent to France, new wings were formed, the administration of which was throughout 1915, centred in Headquarters, RFC France. With a continued increase in numbers it was found that this method of administration was unwieldy, and in January 1916, the first RFC Brigade was formed.

The organisation was now found to work satisfactorily, and, in the conclusion of the Armistice, the Royal Air Force operating with the British Army in France consisted of six Brigades, comprising 17 wings, 84 squadrons, five special-duty flights, and 26 miscellaneous units.

The bulk of the machines were supplied by eight private firms, who built to either Government or private design, and the remainder were produced by the Royal Aircraft Factory at Farnborough. The orders placed with contractors had been given under peace conditions, and were very small, particularly as the Government design of aeroplanes was in a state of transition.

The supply of engines presented a task of equal difficulty. On the outbreak of war, the aero-industry was practically non-existent: lack of experience, lack of skilled labour, and lack of suitable plants made organisation and development at high pressure an extremely arduous undertaking. However, steady progress was made and in 1918, England possessed the largest and most efficient aircraft industry in the world.

Linked with the difficult problems of the supply of aeroplanes, engines. and other technical material, were equally difficult problems involved in the supply of highly specialised personnel. Chief among the latter was the supply of pilots. For these, the main source was the Central Flying School at Upavon, which had accommodation for about 40 pupils, and from which many of the serviceable machines had necessarily been taken for the first overseas expedition.

During the first six months of the war, instruction was hampered by the scarcity of experienced instructors and by the fact that there were only four Government aerodromes in the British Isles. Civilian flying schools were pressed into use and fresh service stations/airfields were constructed, with the result that by May 1915, training being carried out at 11 stations and 284 officers were actually under instruction. In May 1917, there were 32 training stations in existence and a school of special flying for training instructors. Cadet wings were started to deal with the influx of pupil and special schools of aerial gunnery, artillery and infantry co-operation were established.

In addition Egypt and Canada were provided with training

facilities, and by December 1917, there were 78 training stations at home, 15 in Canada, and five in Egypt. On conclusion of the armistice there was a total of 199 training squadrons and the pupils under instruction, inclusive of cadets, numbered 30,000. A total of 21,957 pilots had been trained and graduated as efficient for active service, and, though the training of pilot and observer personnel has been one of the heaviest responsibilities of the Air ministry, it is believed that the British system of training is the best that has yet been evolved.

The Air Ministry also rendered assistance in this respect to Britain's Allies, especially the Americans, who have adopted the British system. In the early days of the war, the urgency of the demand rendered it necessary for pilots to go overseas immediately they had reached the minimum standard of efficiency, and five hours solo flying gualified a pilot for France. This minimum time was gradually raised, and at present the minimum is thirty-five hours, including five hours on the service type of machine to be flown overseas, and, in fact, very few pilots have done less than fifty hours before they are sent on active service. Apart from actual instruction in flying, pilots and observers receive specialised training for the particular work they have to do in connection in reconnaissance, aerial fighting, spotting and bombing for the fleet, anti-submarine, and army duties. The improved efficiency obtained from this scientific mode of training has been one of the principle factors in the attainment of the air supremacy.

Aerial Overview of the Great War

In addition to the training of flying and observer personnel, it had been necessary to establish a number of technical schools in which equipment officers and other ranks receive suitable training in the various specialised branches of their work, such as engine construction, wireless telegraphy, photography, armament navigation, etc. Personnel strength of the British Air Service in 1914 was 197 officers and 1,647 other ranks, whereas to-day there are 27,906 officers and 263,842 other ranks.ⁱⁱ

For the first two and a half years of the war the expansion of the fighting air services was developed largely by the Navy and Army, along parallel lines, and the existence of these separate air services resulted in unnecessary expenditure and confusion and delay in obtaining supplies.

In February 1917, an attempt was made to remedy these defects by the formation of an Air Board, upon which the Admiralty and the War Office were represented. All questions of supply were at the same time placed under an Aircraft Production Department of the Ministry of Munitions, which successfully solved this difficult problem. The Air Board became responsible for the design and allocation of aircraft and accessories, but the administration of the two services remained separate.

Although an improvement on the old system, there was still considerable duplication of effort and waste of money and it was finally decided to amalgamate the two air services under one control. Accordingly, in January 1918, a Secretary of State for Air was appointed and the Air Board was reconstituted as the Air Ministry to take over the administration of both naval and military services to form the Royal Air Force in April 1918. Before amalgamation, the Royal Flying Corps at home consisted of a training division comprising 109 squadrons and 13 schools. The schools were directly under the training division, and the squadrons were organised into four training brigades with 22 wings. The RNAS consisted of a number of groups, which were administered directly by the Admiralty.

Both systems were capable of considerable improvement and a new organisation was set up. Great Britain was divided into 5 areas under the direct control of the Air Ministry, but each area was responsible for its own internal administration, and was sub-divided into training and operational groups.

It is under this new organisation that the main development in the air service has taken place, and it is claimed that the results achieved in all theatres of war, as well in home defence, have more than justified the establishment of the Royal Air Force as an independent fighting force of the Crown.

Development and Achievements in Various Theatres of War

In co-operation with the Army, the British air service has expanded to 84 squadrons, with five special-duty flights and 26 miscellaneous units, such as aircraft parks, repair depots etc.

Owing to the difficulty of collecting detailed records from some of the earlier formed units, and the fact many of the records have either been lost or destroyed, it is impossible at the moment to give any accurate summary of operations in the air previous to July 1916. Since that date, careful records have been kept.

It is worth noting that from July 1916 to the 11 November 1918, the Royal Air Force on the Western Front (including the Independent Force) destroyed or brought down 7,054 enemy aircraft, dropped 6,942 tons of bombs, flew over 900,000 hours (nearly 103 years), and fired over 10 1/2 million rounds at ground targets.

In addition to the work of the main force working with the armies on the Western Front, operations of the Independent Force, RAF, are worthy of special mention. During 1914 and 1915, isolated raids were made by the RNAS on Cuxhaven, Dusseldorf, and Friedrichshafen, but shortage of material and other difficulties made it impossible to keel up sustained efforts. In October 1917, the 8th Brigade RFC, was formed to operate from the Nancy area against German chemical and iron industries.

This brigade accomplished much valuable work, but only consisted of 3 Squadrons and on 1 April 1918, when the Royal Air Force came into being, the Air Ministry immediately recognised the great possibilities of a policy of strategic interception, as well as the opportunities for striking at the morale of the German nation. Every effort was made to build up and maintain in the field a powerful striking force to execute a series of systematic raids on key munition and chemical industries of Germany.

Accordingly, on 8 June 1918, the Independent Force, Royal Air Force, was constituted, and the three squadrons of the original 8th Brigade, RFC, were gradually increased to 10. Of these, five were for day bombing, four for night bombing,

while the 10th consisted of scouts for the protection of the raiding formations and for defensive operations against the enemy fighters.

The effort, both morally and materially, of the raids on German territory carried out during the summer of 1918 can hardly be over-estimated. The utterances of the German press and public bear eloquent testimony to the results of the new policy and it is known that the German High Command were compelled to recall at least 20 fighting squadrons from the Western Front and to mobilise a large number of ground troops to man anti-aircraft batteries and an elaborate system of searchlight and balloon barrages. In fact the policy was so successful that when the Armistice was signed on 11 November 1918, it was intended to increase the Independent Force to a total of 48 squadrons by the end of May 1919.

Gallipoli Campaign

The Air Force in the Gallipoli campaign was supplied entirely by the RNAS. In spite of many and severe hardships and almost insuperable difficulties in regard to transport, supply and workshop and repair arrangements, much excellent work was accomplished, particularly during the latter stages of operations. In addition to the normal duties of co-operating with the Army and various units of the Fleet, the RNAS was called upon to photograph the greater portion of the Peninsular for map making purposes, and by means of these photographs the first very inaccurate maps were corrected.

Constant bombing operations were also carried out on various objectives on the Peninsular and in the Straits, and frequent raids were made on the enemy's lines of communication, on the mainland and upon Constantinople itself.

The Dardanelles campaign was essentially a joint enterprise and the fact that the RNAS was able to supply the needs of both Navy and Army is a tribute to its efficiency and adaptability. A single intelligence system was maintained, and the photographs and observations were distributed to both naval and military Staffs. Further, it is not too much to claim that the success of the evacuations from Suvla and Helles were, in considerable measure, due to the reconnaissance and patrol work of the RNAS. It was in this campaign that torpedoes were for the first time carried by aircraft, and three enemy ships were destroyed in the Dardanelles by this means.

Middle East

While the development of the RFC was in progress in France, development on a similar, though smaller scale, was taking place in the Middle East. The organisation in this theatre began in connection with the Turkish operations against the Suez Canal early in 1915.

As soon as the intended attack on the Canal became known, a flight of aeroplanes was made up by taking two machines which were on their way to India, and a few others which happened to be in Egypt for exhibition purposes. By autumn of 1915, this flight had been expanded to a squadron and despatched to Mesopotamia, while one other squadron was sent from England took its place in Egypt and became the nucleus of expansion for the Middle East.

A training organisation continued to develop and in July 1916

was formed into a brigade with three wings in Macedonia, Sinai and Mesopotamia respectively, a training wing in Egypt and a squadron in East Africa. In 1917 the Middle East Brigade became Major- General's Command, and in October 1918 consisted of:

- Egypt 1 training brigade of 8 squadrons, 3 schools of special flying, 1 cadet wing, 1 school of military aeronautics.
- Palestine 1 Brigade of 7 squadrons.
- Mesopotamia 1 Wing of 3 squadrons.
- Macedonia- 1 Wing of 3 squadrons

In addition, the Command included one aircraft depot, three

aircraft parks, one aircraft factory and a number of engineer repair sections.

The British Air Service did not operate on the Italian front until 1917, after the Italian retreat from the Isonzo, when the Italian brigade was formed and despatched. It is acknowledged that our squadrons rendered very valuable assistance in turning the Austrian retreat into a rout.

i AWM estimate

ii The AFC consisted of 460 officers and 2234 other ranks at the end of the War. Source: Douglas Gillison *Royal Australian Air Force* 1939-1942

The Astro Compass

An instrument used by navigators in World War II and in later years is well and truly in the antique box. However, it still has a mystery about as most aviators have never seen such an instrument, let alone know what it was used for. The Astro Compass has not been used by navigators for about 45-50 years. As a navigator who used such an instrument during training 53 years ago, it was a great instrument for heading checks and 'running fixes' then but was soon relegated to the antique box, never to be seen again - for 53 years.

It was attached to the sextant mounting aircraft and if left in place after use, did present a health hazard if one leapt quickly into the astrodome for a celestial sight when running late to start a pre-computed star sight. However, it wasn't retired because of OH&S limitations; it outlived its usefulness as a navigation instrument.

Uses

By sighting a known celestial body, usually the sun, with the astrocompass, the correct true heading of the aircraft could be determined, essential if you flew in maritime squadrons over the sea for long periods - which they did. It could also be used for determining the magnetic compass deviation and for taking 'running fixes' by taking visual bearings of landmarks.

True Heading Check. The azimuth or true bearing of the sun was calculated for a set time and set on the astro compass sub-scale, together with the sun's declination. The true heading of the aircraft was set on the true course main drum scale until the shadow of the sun ran down the sight assembly and the reading adjusted to determine the exact true heading.

Magnetic compass deviation. Following alignment of the lubber line to the true heading, the observer applied local magnetic variation (MAGVAR) to the true heading to determine the magnetic heading - a comparison with the displayed compass heading then determined the deviation, which was recorded on a deviation card kept close to the magnetic compass.

True Bearing. By setting the aircraft heading and depressing the declination scale to view a landmark, accurate visual bearings could be taken as the geographical feature passed abeam the aircraft.



The Astro Compass MkII





Article by Lance Halvorson



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JSM (Joint Strike Missile)

Modern warships and military installations on land worldwide are costly, effective, of strategic importance and therefore heavily defended. In order to destroy such targets, a modern and effective weapon system, with penetration capability equaling supersonic missiles, is required. The Royal Norwegian Navy (RNoN) developed the NSM based on 50 years of missile experience. This missile was developed to meet military challenges of the 21st century and is now in series production.

The Royal Norwegian Air Force (RNoAF) needs an effective strike weapon for its new F-35/JSF fighters. Based on the proven NSM technology, RNoAF started a new missile development, the Joint Strike Missile (JSM).

The JSM is designed for attacking highly defended targets at sea and on land, including operations on open sea, in the littorals and confined waters. Due to its unique target recognition capabilities, it can be used in congested areas, with a mix of enemy and friendly targets/installations. The JSM has extremely good defence penetration capabilities, the seeker system provides a programmable hit-point and the intelligent programmable fuze ensures the required damage in the target.

The missile is designed to fit inside the weapons bay of the F-35 A and C versions. It can also be carried externally on other aircraft. Funded by RNoAF and Australia, integration work has been ongoing since 2004, a close co-operation between Kongsberg and Lockheed Martin.



Artist impression of JSM and a RAAF F-35. Photo: Kongsberg

The missile has a Link 16 compatible data link for target update. re-targeting, bomb hit indication and mission abort. The highly effective warhead with titanium casing and programmable fuze has low weight, still providing a destruction capability equivalent to a 500 lb bomb. Primary destruction effect is blast, with secondary effects from controlled fragmentation.

The main characteristics of JSM can be summarized as follows :

Range:	200+ nm
Speed:	High subsonic, adjustable
Guidance:	I3R, Inertial, GPS, Terrain match



Artist impression of JSM and a RAAF F-35. Photo: Kongsberg

Programmable fuse, 120 kg weight (100 kg TNT equivalent)
3.70 m
1.40 m
375 kg
Turbojet engine
M0.6 to high subsonic

The development is funded by Norway through phase 3 (final system integration and flight testing) which ends in 2017. The first flight tests will take place early 2015. Phase 3 will give opportunities for other nations to become part of the JSM program, and several of the JSF/F-35 partner nations have shown strong interest.



KONGSBERG

Surveillance and Response Group

Surveillance and Response Group (SRG) was formed on 30 March 2004 by merging the former Surveillance and Control and Maritime Patrol Groups. Its motto is 'Foremost Sentinel', which encapsulates the group's contribution as the early warning and response capability of the Australian Defence Force. Headquarters Surveillance and Response Group is at RAAF Base Williamtown, NSW. Its personnel are responsible for personnel management, capability management and development, technical capability and business management.

The Surveillance and Response Group is responsible for:

- all of the Air Forces air surveillance assets
- · maritime warfare
- · aerospace, surveillance and battle space management
- · developing intelligence, surveillance and reconnaissance (ISR) and electronic warfare (EW) capabilities.

Surveillance and Response Group provide the surveillance, warning and airspace control capability for the Australian Defence Force. It provides the following aircraft and systems:

- AP-3C Orion
- E-7A Wedgetail
- · Heron (remotely piloted aircraft)
- Jindalee Operational Radar Network (JORN)
- Joint Battlefield Airspace Controllers.

SRG has over 2100 personnel in many locations in Australia working in the following areas

No 41 Wing (Air Defence)

No 41 Wing (41WG) is based at RAAF Base Williamtown and commands all of the Air Defence operational and training units. Spanning across Australia, these units include 3 Control and Reporting Unit (3CRU) and Surveillance and Control Training Unit (SACTU) located at Williamtown; 114 Mobile Control and Reporting Unit (114 MCRU) in Darwin and 1 Radar and Surveillance Unit (1 RSU) in Adelaide. SACTU provides the training for Air Combat Officers and Air Surveillance Operators to enable them to perform effective air battle management and surveillance operations. 41 Wing headquarters is chiefly responsible for tasking of its subordinate units in order to provide continuous wide-area surveillance, airspace control and execution of air battle management operations.

No 42 Wing (Airborne Early Warning and Control)

No 42 Wing (42WG) reformed on 1 January 2006 and is located at RAAF Base Williamtown. The Wing delivers the E-7A Wedgetail Airborne Early Warning and Control (AEW&C) capability for the Air Force. This capability incorporates independent air and support operations in the maritime and land environments, with 2SQN supporting the aircraft at Williamtown. The AEW&C aircraft represents an new capability for the ADF, providing a platform that gathers information from a wide variety of sources for analysis and distribution to friendly air and surface assets. AEW&C will control the tactical battle space, providing direction for fighter aircraft, surface combatants and land based elements, as well as supporting KC-30A tanker aircraft and other intelligence platforms.



An E-7A takes off on another MEAO mission Photo: RAAF

No 44 Wing (Air Traffic Control)

No 44 Wing (44WG), headquartered at RAAF Base Williamtown, commands all of the Air Traffic Control (ATC) detachments of which there are eleven across Australia. 44WG also commands the ATC Technical Ground Electronic Services (GES) workforce. 44WG through its detachments is responsible for the delivery of aerodrome and radar control services to Army, Navy and Air Force and also for the provision of tactical control of forward airfields, battlefield aviation and other airspace activity, both within Australia and for operational

deployments. 44WG personnel are involved in overseas operations including, peacekeeping and humanitarian missions.

No 92 Wing (Maritime Operations)

No 92 Wing (92WG) has its Headquarters at RAAF Base Edinburgh and is the first Maritime Wing in the history of the Royal Australian Air Force. 92 WG commands two flying squadrons, Nos 10 and 11 Squadrons, a training unit, No 292 Squadron; an operational detachment, 92WG Detachment A at Butterworth, Malaysia; and a number of operational support and development elements.

92WG operates the AP-3C Orion aircraft and its roles include anti-submarine warfare and surface surveillance. The Orions are equipped with torpedoes and Harpoon anti-shipping missiles. The Wing is also responsible for conducting long range intelligence, surveillance and reconnaissance missions in support of Australia's national interests worldwide. 92 WG is also responsible for search and survivor supply missions throughout Australia's region of responsibility.

P-3C Orion Operations in MEAO

On 28 Jan 03, two P-3C Orion maritime patrol aircraft in the Middle East Area of Operations (MEAO) flew their first missions under Operation Slipper. Patrolling day and night ahead of the coalition invasion of Iraq, the aircraft contributed to the overall objective of achieving and maintaining sea control in the northern Persian Gulf. The superior intelligence from the Orions' sensors provide coalition commanders with an accurate surveillance picture of surface activity, enabling potentially hostile shipping to be identified and challenged outside the allied warships operating area.

The operation marked the start of a commitment that flowed onto Operation Catalyst (the rehabilitation of Iraq following the overthrow of dictator Saddam Hussein) and would last for more than five years. In that time, the two-aircraft detachment logged more than 12,000 flying hours undertaking overland reconnaissance as well as maritime patrols and oil terminal protection sorties.



Two AP-3C Orion aircraft at Al Minhad Air Base in UAE. Photo: RAAF

After nearly 10 years of operational service in the Middle East, the final AP-3C Orion aircraft from No 92 Wing, RAAF Base Edinburgh, returned home to Australia on 30 Nov 12. More than 3500 personnel rotated through the almost

decade-long deployment where the Orions have been responsible for conducting overland intelligence, surveillance and reconnaissance tasks in Afghanistan and Iraq, maritime patrols of the Arabian Gulf and North Arabian Sea and more recently, counter-piracy missions in the vicinity of Somalia. On 11 July 2013, the South Australian Governor, His Excellency Rear Admiral Kevin Scarce AC CSC RANR, and Mrs Liz Scarce, hosted a ceremony at Government House to present a Meritorious Unit Citation to No 92 Wing.

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Future of Air Force - Plan Jericho

Chief of Air Force, AIRMSHL Geoff Brown, launched Plan Jericho at the Australian International Airshow at Avalon on 23 February 2015. The plan will transform Air Force through three themes:

- Harnessing the potential of our existing force with an increased focus on integrated air combat effects.
- Promoting innovation and rewarding it by empowering our workforce.
- Changing the way Air Force acquires and sustains capability to keep pace with technology.

"In the next 10 years, Air Force will have one of the most advanced aircraft fleets in the world," CAF said. "This will make our operations fundamentally different. We cannot be complacent by thinking that simply having the next generation of aircraft technology will create an advanced Air Force."

CAF highlighted that the E-7A Wedgetail was in service and the F-35A Lightning II, P-8A Poseidon and EA-18G Growler were a few years away. He said, "These aircraft will bring more data and situational awareness than ever before . We need to be able to share this information across aircraft' platforms through networking and enable good decisions without being overwhelmed by the high volumes of data."



CAF presenting Plan Jericho at the 2015 International Air Show at Avalon , 23 February 2015 Photo: CPL David Said RAAF

AIRMSHL Brown said Plan Jericho was about more than just the F-35A. "It is about much more than all of our aircraft and platforms. It is about root and branch transformation. It will affect the way we train, the way we fight, and the way we sustain ourselves. We must also transform our relationship with industry to ensure we procure and innovate in alignment with the breathtaking speed that technological change is occurring in the information age."

CAF identified the essentiality of information as a critical resource and an enabler of capability.

"Any military force which fails to grasp this reality and fails to respond to it appropriately, faces catastrophic defeat," he said. "Unless we transform, we will fail to exploit the maximum advantages conferred on us by our modern weapons and systems, and we will also risk operational failure in the complex, dynamic and fluid environment of the information age."

AIRMSHL Brown said that decision superiority through more rapid procurement, evaluation and dissemination of information was fundamental to the primary aim of Plan Jericho. Continuing, he said "The proliferation of information and the speed with which it is transmitted and shared has rendered industrial-era structures and work practices irrelevant. We must embrace this change. Plan Jericho is the vector Air Force will follow into this challenging and exciting future."

Concluding, CAF said Air Force needed to work across Defence to create integration with Army and Navy's technologies to deliver the best possible options for government from these advanced aircraft. "We need to transform into an integrated, networked force that can realise the potential of this technology, and maintain our position as masters of the air domain".

The Continuing Criticality of Air Power to National Security

'The modern way of war and other high-end security operations demand air superiority to permit effective land and sea manoeuvres' -- Air Marshal Angus Houston,

Kenote address, RAAF Air Power Conference, 16 September 2004

In June 1996, the RAAF held a conference in Canberra with invited speakers of international repute to explore the theme of 'New Era Security' and investigate the position of 'the RAAF in the next twenty-five years'. The proceedings of the conference are available at the APDC website—http://airpower.airforce.gov.au/Publications/ list/35/Conference Proceedings.aspx?page=3

One of the presenters, a much respected academic, finished his rather provocative paper stating;—

'If present trends persist, thirty years from now most air forces will have dissolved into space commands on the one hand and some form of air cavalry on the other. In between, most major combat aircraft will have disappeared. Like dinosaurs, they will be confined to musea where they will no doubt be admired by gaping crowds. Pilots will have

hung their pressure suits in the closet, never to put them on again. An age in military history will be gone. It was glorious while it lasted.'

In a more recent publication, A History of Air Warfare, (John Andreas Olsen (ed), Potomac Books, Inc, Washington D.C., 2010) in a chapter written by him 'The Rise and Fall of Air Power', the professor refers to his 1996 paper and makes the same point that the world is moving towards the 'end of air power' and argues that since all future conflicts will be of the low-intensity kind and irregular in nature, 'there probably is no compelling case for independent air power at all'.



These assertions and the logic behind them, especially when they have been made by a respected academic, need to be analysed in detail and comprehensively repudiated.

First, in the 1996 paper a continuum of logic was put forward to assert that combat air power had seen the end of its day. It was reasoned that the 'sheer expense and complexity' of building and maintaining an air force made it possible only for nation-states to do so. From this flowed the idea that air forces could primarily be employed only against other states and since state-on-state conflicts are highly unlikely to take place in the contemporary scenario, air forces would be redundant.

The use of air power against irregular forces with no clear borders was considered to be extremely limited and therefore not worth the resource expenditure required. A similar argument has been put forward in the aforementioned book.

It is apparent, even to a casual observer that since 1996 air power has continued to 'rise'—to an extent that most governments consider it as the force of first-choice when responding to emerging challenges. First, the spectrum of conflict in which air power is employed in ensuring national security has broadened considerably in comparison to even two decades ago. It now encompasses humanitarian aid and disaster relief (HADR) activities at the non-lethal end of the spectrum to waging a war of national survival at the other end.

Even when engaged in HADR missions, it may become necessary for the combat element of the force to be involved in protecting the airlift and other assets being employed. In a globalised world, responsible nations need to be able



to respond rapidly to evolving crises and air power is the only capability that can deliver within a realistic timeframe. The connection between national security and air power, predominantly vested in air forces, is direct and tangible.

More importantly, what needs to be analysed is air power's contribution to the contemporary wars. First, the argument that air power lacks the ability to avoid collateral damage has been very clearly discredited in the past decade or so. Today air power can and does carry out proportionate, precise and discriminatory attacks that neutralises even small and moving targets without causing any noticeable collateral damage. In fact it is this very capability that makes it the weapon-of-choice for employment against irregular forces operating without readily identifiable centres of gravity. Air power has proven itself, time and again, to be more effective and lethal than the employment of surface forces in irregular warfare.

Second, The Western world has been engaged in conflicts against irregular forces for more than a decade, in places far away from home. The operations have all been expeditionary in nature and even the surface forces are compelled to rely on air power—both airlift and combat air power—for strategic sustainment as well as for efficiency at the operational and tactical level. There is now no concept of operations being developed that does not leverage the multi-dimensional capabilities of air power to ensure success in the battlefield. This is a far cry from the predicted demise of all combat air power.

Third, the application of lethal military force is now under extreme scrutiny and therefore the constraints in terms of impinging on the sovereignty of recipient nations when military interventions are contemplated have become important political considerations. Air power's ability to deliver measured responses, repeatedly and with unparalleled flexibility, while not having to create a semi-permanent footprint in another nation is now a prized capability. No government can ignore the advantages and influence that come with the possession of truly expeditionary air power capabilities delivered by an air force. No other military or national capability can compare favourably with the rapid and effective response that air power provides to a government—in peace and in war.

There are some one-sided arguments that are being made questioning the necessity to have independent air forces. These opinions do not take into account the entire spread of air power deliverables and are more often the product of an

incomplete understanding of the contemporary battlespace. Air forces provide the fundamental prerequisite for all other operations to succeed—they deliver control of the air. The arguments to dismantle air forces are more often than not made by Western thinkers.

It will be necessary to mention here that this thinking comes from the fact that no multinational Western surface force has had to operate without air superiority delivered by their air forces, ever since the Korean War more than half-a-century ago. In the span of few generations it is easy to forget, even within a well-informed military force, the extreme discomfort when it has operate under enemy air attacks—one only has to ask the British military members who served in the Falklands War. Ever since air power became a weapon of war, control of the air has been and will continue to be the foremost quest of air forces.

In the contemporary scenario, governments have certain expectations of their military forces. A capable air force bridges the gap between expectations and reality by providing flexible and rapid response options to address emerging and evolving national security challenges. The so-called 'fall' of air power, being predicted since 1996, is not visible even in the far horizon. Arguments stating that air power has outlived its usefulness are not only naive but also ill-considered vis-a-vis the security of a nation.

Key Points

- With increasingly sophisticated technology being available air power has become capable of proportionate, precise and discriminate application
- Contemporary conflicts rely more heavily on air power for their successful prosecution than ever before
- Predictions of the demise of air power have been made on incorrect assumptions and a lack of understanding of the requirements of national security.

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New Chief of Air Force

Prime Minister Tony Abbott and Chief of Defence Force (CDF) Air Chief Marshal Mark Binskin announced the appointment of the new Chief of Air Force on 26 March 2015.

Air Vice Marshal Davies Gavin 'Leo' Davies has been named as the new Chief of Air Force and will take over the position from Air Marshal Geoff Brown on July 4. AIRCDRE Warren McDonald will become Deputy Chief of Air Force.

The Prime Minister and CDF also announced the appointment of the new Chief of Army Lieutenant General Angus Campbell. Air Chief Marshal Binskin congratulated Air Vice Marshal Davies and Lieutenant General Campbell on their appointments. "With these two appointments, that finalises the new command team in the Defence Force," he said.

Air Vice-Marshal Davies joined the Royal Australian Air Force as a cadet Navigator in 1979 and graduated to fly P-3B and P-3C Orion aircraft with No 11 Squadron at Edinburgh in South Australia. In 1987 Air Vice-Marshal Davies completed pilot training and after completing F-111 conversion course was posted in 1988 to No 1 Squadron at RAAF base Amberley.



Chief of Air Force (Designate) Air Vice-Marshal Gavin Davies

In 1990, Air Vice-Marshal Davies was posted to Cannon Air Force Base, New Mexico, to fly F-111D aircraft on exchange with the United States Air Force. On return to Australia in 1993 Air Vice-Marshal Davies was posted to No 1 Squadron as the Operations Flight Commander followed by one year as Operations Officer at Headquarters No 82 Wing during 1996. After a posting in 1997 and 1998 as the Executive Officer at No 1 Squadron, Air Vice-Marshal Davies completed RAAF Command and Staff Course. In 2000, he commenced two years in Capability Systems within Defence Headquarters.

In 2002 and 2003, Air Vice-Marshal Davies' long association with No 1 Squadron was again rekindled when he returned as Commanding Officer and achieved 2000 hours flying the F-111. He was the Staff Officer to the Chief of Air Force during 2004 before taking up the post of Officer Commanding No 82 Wing at RAAF Base Amberley.

Air Vice-Marshal Davies worked as Director Combat Capability within Air Force Headquarters in 2006 and 2007, during which he was deployed to the Middle East to work within the Combined Air Operations Centre. In 2008 he was the Director General Capability Planning within Air Force Headquarters until 2010, when he was posted to Washington as the Air Attaché.

He was the Deputy Chief of Air Force from January 2012 on his return from Washington. Air Vice-Marshal is an Officer of the Order of Australia (AO). He is married to Rhonda who is a Registered Nurse and they have two children; Erin who is herself a Registered Nurse (midwife) and Jacob.

AIRMSHL Brown confirmed the appointment of AIRCDRE McDonald as DCAF on March 31. "AIRCDRE McDonald has excelled in a number of senior commands and brings a wide range of operational and staff experience to the role," AIRMSHL Brown said.

Feature

The Joint Strike Missile

The Joint Strike Missile's development is already funded by the Norwegian government – a key advantage at a time when the U.S. Navy is considering cost-effective solutions for next-generation anti-ship weapons. Norway is also funding its integration into the F-35 Lighting II jet.

Raytheon and Kongsberg announced their partnership July 15 during the 2014 Farnborough International Airshow outside London.

The world's navies have become increasingly concerned about defending far-flung fleets, leading to new weapons aimed at striking far beyond the horizon. In June, Raytheon's new Standard Missile-6 performed the longest surface-to-air strike in naval history. The company is also equipping its Tomahawk cruise missile with a seeker, allowing it to hunt down moving targets more than 1,000 miles away.

Raytheon is also building the powerful new Air and Missile Defense Radar for U.S. Navy ships. The company's JLENS aerostats, meanwhile, can see hundreds of miles out to sea and direct missiles fired from over the horizon using a sophisticated targeting network.

"Raytheon's global development capability allows us to identify and offer the advanced and affordable solutions our customers require for the complex missions of the future," said Dr. Taylor W. Lawrence, president of Raytheon Missile Systems.

Busy Day for Missile News

The Raytheon-Kongsberg announcement was part of a raft of missile news at the Farnborough show.

Company officials gave details on a May U.S. Air Force test in which an F-35B successfully fired two AIM-120 Advanced Medium Range Air-to-Air Missiles. The missiles tracked and engaged two aerial targets – the first dual AMRAAM shot from any variant of the F-35 and the first live AMRAAM shot from the F-35B, the version of the fighter that can land vertically.

"AMRAAM's seeker and guidance section are the most advanced of any air-to-air missiles flying today," said Mike Jarrett, Raytheon Air Warfare Systems vice president. "AMRAAM gives the F-35 significant firepower and provides warfighters around the globe with an unfair advantage in the fight."

Company officials also briefed journalists on the Small Diameter Bomb II, which has completed preliminary fit checks and pit tests on the F-35. The fit check showed the SDB II fits in the fighter's weapons cavity and aligns with the plane's electronics. The F-35 carries its weapons internally, unlike current fighter planes, which store weapons on their wings.

SDB II - Destroys moving and stationary targets in adverse weather with precision from stand off ranges to immediate attack ranges utilizing a tri-mode seeker.

The pit test checks the weapon's ability to eject from the aircraft. The bomb was ejected from the plane's bay to ensure



it clears possible obstructions, and was dropped into a pit filled with absorbent materials.

The tests supported the F-35's ability to carry eight SDB II bombs – winged, gliding weapons that can be fired more than 45 miles from their target. The SDB II's seeker can see through otherwise troublesome battlefield obstacles such as heavy dust and storm clouds.

Integration of the SDB II on the F-35 by the U.S. Navy and U.S. Air Force is "an important first step in bringing SDB II's capabilities to other front-line fighters," said John O'Brien, Raytheon SDB II program director.

"With the start of low-rate initial production right around the corner, SDB II will soon be in the hands of our warfighters and making a difference on the battlefield," O'Brien said.

The F-35B also had a successful air-to-ground weapons test with Raytheon's GBU-12 Paveway II laser-guided bomb in October 2013, releasing the weapon from 25,000 feet and hitting a tank at Edwards Air Force Base in California. The bomb used in that test did not contain explosives.



Paveway[™] family of laser-guided and GPS and laser-guided bombs has revolutionized tactical air-to-ground warfare by converting "dumb" bombs into precision-guided munitions.

Early planning has also started for the integration of the SDB II on the F/A-18E/F Super Hornet, and a series of F-16 flight tests using SDB II Instrumented Measurement Vehicles also have been completed. Other Raytheon announcements today include:

Air Force Orders 200 MALD-J Decoys

Raytheon announced it has received an \$80 million U.S. Air Force contract for production and delivery of 200 Miniature Air Launched Decoys. The latest contract award is for the jammer variant known as MALD-J, and deliveries are set to start in early 2015.

MALD protects air crews and aircraft by mimicking the signatures and combat flight profiles of U.S. and allied aircraft. This is the seventh production lot for MALD.



MALD is an expendable air-launched flight vehicle that looks like a U.S. or allied aircraft to enemy integrated air defense systems.

"MALD protects aircrews and their aircraft by mimicking the signatures and combat flight profiles of U.S. and allied aircraft," Jarrett said. "By adding a jamming capability to MALD, we have created the world's only stand-in jammer, giving the warfighter increased capability in the same package."

Successful Flight Test for Anti-radiation Missile

Raytheon and the U.S. Air Force in successfully flight-tested an upgraded High Speed Anti-Radiation Missile (HARM) in May. The HARM Control Section Modification (HCSM) is more accurate, reducing potential collateral damage.

During the test, an F-16 fired an HCSM against an emitter that shut down, while a similar decoy threat outside the designated missile impact zone attempted to lure the missile off target. The missile rejected the decoy and found its primary target, demonstrating that HCSM is ready for deployment to the U.S. Air Force.

"Warfighters have long relied on the combat-proven HARM to suppress or destroy surface-to-air missile radars, earlywarning radars and radar-directed air defense artillery systems," Jarrett said. "With HCSM, we are adding a GPS receiver and an improved inertial measurement unit to improve the probability of hit, defeat counter-HARM tactics and control where the missile can and cannot fly."

Raytheon - Kongsberg

Missile Counters Advanced Radar Threats

The AGM-88 High-Speed Anti-Radiation Missile (HARM®) is a joint U.S. Navy and Air Force program developed by the Navy and Raytheon.

HARM's primary mission is to suppress or destroy surfaceto-air missile radar and radar-directed air defense artillery systems. Once airborne, it can operate in three modes: preemptive, missile-as-sensor and self-protect.

Continued hardware and software upgrades have allowed HARM to counter advanced radar threats. HARM has proven itself in both reliability and combat performance. It is employed on a variety of Navy, Air Force and Marine Corps aircraft including the EA-6B, F-16 and F/A-18. The U.S. government makes HARM available through Foreign Military Sales.

Raytheon is developing a HARM upgrade, called the HARM Control Section Modification.

HCSM adds a GPS receiver and an improved inertial measurement unit for precision navigation. HCSM also features a digital flight computer that merges targeting solutions from navigation and seeker systems. The enhancements improve the probability of hit, while controlling where the missile can and cannot fly.

Visit http://www.raytheon.com/capabilities/precision/overview/ index.html to view Raytheon's precision guided munitions (PGM) product list. *Article from Raytheon and USN*

VHF Radar

The emergence of radars operating in the VHF band (veryhigh-frequency) bands that can detect stealthy aircraft at long range is gaining attention of analysts. The concern is that these VHF radars could eventually pass targeting data to fire control elements for air defense systems.

Russian "anti-stealth" radar systems on display at the Moscow air show in 2013 justified concerns about stealth, and the Russians are thought to have made advances in integrating their air defenses. Also, a Chinese manufacturer last year showcased a so-called counter-stealth VHF active, electronically scanned array radar at the Zhuhai air show.

"Stealth is an interesting discussion, because people tend to identify a piece of it and think someone will compromise that piece and [conclude] that therefore stealth is no longer valuable," said Air Force Chief of Staff Gen. Mark Welsh during a Jan. 15 press conference at the Pentagon. "The reality is, stealth is a combination of things. It is not just [being] low observable. It's also speed, low observability, different ways of collecting data, different ways of transmitting and protecting transmissions. It is a way of breaking kill chains."

The reality of an evolving threat is influencing plans for the next-generation Long-Range Strike Bomber, which is more likely to take advantage of broadband stealth technologies. Likewise, planners are considering broadband 'stealthiness' for sixth-generation fighters—the F/A-XX for the Navy and F-X for the Air Force. *Article from Breaking Defense*



Freightquip Pty Ltd and TLD (GSE) work together to supply the Australian and New Zealand market with world-class aviation ground support equipment.

ur business relationship with the Royal Australian Air Force (RAAF) was established over 15 years ago with the initial supply of TEK300D Pre Conditioned Air ground carts. A new generation higher capacity ACU-804 unit was introduced into the fleet some 7 years ago with the ability to fulfill AC requirements for the C130, C17 and KC-30A, and has since seen a gradual full fleet replacement occur of the older TEK300D's. (The TLD ACU804 Pre Conditioned Air is pictured above with the RAAF C17 at the 2013 Avalon Air Show).

Freightquip's most recent project has been supporting the supply of the new Aircraft Loader fleet and has provided the opportunity to showcase to the RAAF, Freightquip's ability to deliver local technical expertise and support. Combined with enhanced OEM support, Freightquip has led the training, delivery and on site equipment commissioning assisting with the fleets transition into service.

Freightquip and TLD have partnered together in delivering to the RAAF a new ACL fleet consisting of a single specification delivering fleet continuity. Beyond the advantages of the equipment, Freightquip brings enhanced operator, maintainer and parts support and has also developed a compliant and accompanying RAAF approved Training Package for both Operators and Maintainers. These courses have been implemented as per contract commitment and we look forward to further assisting the RAAF when and where required.

We have seen to date the successful delivery and implementation of the full compliment of units into Richmond and Amberley Bases with the roll out of the remaining fleet into other bases on schedule.

The PFA50 was purpose built for military applications and includes many innovative features not previously seen or even considered on earlier generations of this type equipment. Fast and easy deployment and aircraft approach, air transportable on both C130 and C17, self-loadable, 22.7 tonne 5 pallet lifting capacity and a rugged design which is enhanced by it's variable ground clearance and ability to compensate for extreme ground conditions. The feedback from all RAAF stakeholders has been extremely positive throughout the entire project. Through the culmination of all of the stakeholders input, the first units entered into limited operational service in November 2014. This in itself was a major milestone as this operational activation was well in advance of the original projections.

Freightquip Pty Ltd and TLD is proud to be associated with the Royal Australian Air Force.



Fleet of RAAF PFA50 Aircraft Loaders



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My Neptune Days – 1963-66

Cold War memories of SP2H Neptune operations from Townsville.

Berlin is a long way from Townsville, but for me and many others the two places were linked by the dominant event of the times - the Cold War. No one I knew had been to Berlin, but that didn't matter - we all knew about the airlift that stymied a Soviet takeover bid, and the famous wall of later years. The Cold War was virtually world-wide, but no-where exemplified it quite like Berlin.

Eventually, the difficulties and dangers of managing a world constantly on the brink of nuclear war over-rode all else, and both sides made compromises. By the mid-1980s, determined efforts from the USA and USSR were easing Cold War tensions. By the end of 1989 the wall was effectively gone and the Cold War was all but ended.

Now it's over, it is often hard to recall just how serious the Cold War was. To begin with, it wasn't always cold. Along with many others, Australians fought in Korea, Malaysia and Vietnam. For them, the bombs, bullets and casualties were just as real as in previous wars. But for many of us there was no shooting. Instead, our Cold War consisted mostly of surveillance flights, intelligence gathering and training to fight if need be.

My involvement began in the SP2H Neptune in Townsville in 1963, more than fifty years ago. The Cold War was always bubbling away in the background, but much of the time there was little direct involvement. For us, the day-to-day focus was largely on the SP2H and its operations.

Many memories have faded, but some things I still remember surprisingly well. One is of the extraordinary noise from the aircraft's reciprocating engines and jets on take-off. Often described as 'two that turn and two that burn', they produced a deafening and distinctive sound, unforgettable for all but the deaf.

The jets were left on for the 200-knot climb, after which they were shut down and speed reduced to some 180 knots for cruise. This made the SP2H Neptune the only aircraft I flew in that climbed faster than it cruised.

Another memory is how hot we could be at low level in the tropical summer. The aircraft was crammed with electronics, mostly valve driven, that generated a good deal of heat to add to that already acquired from the tropical sun. There was no air-conditioning, so we often took off hot and stayed hot during low-level flights.

This made long day-light searches at low level in summer hard work, but sometimes there was no option. We were a Maritime Reconnaissance squadron, and flying low to hunt submarines or search for overdue or distressed fishermen and sailors went with the job.

These civilian searches were usually hot and sweaty affairs, but that didn't matter to us if someone was lost at sea. Unfortunately, because of the cost, we were often used only when all else had failed, the datum was days old and

our chances of success were poor. However, we were not normally tasked unless some hope, however small, still existed – except, that is, when interfering politicians got involved.

One especially ridiculous case was a task to look for a retired Dutch military officer thought to have left Sydney a month before to sail back to Holland. He apparently had argued with his wife and set out without telling her anything. When she was unable to pay her hotel bill she sought help from Australian friends who, in turn, pulled some political strings.

Our briefing was somewhat embarrassing for the Search and Rescue Officer (SARO). All he could tell us was that the long-lost Dutchman was considering buying either a red and white boat or a green and yellow one, but not if he was planning to sail via Suez or Panama. We did, however, have a personal description – he was a tall, well built blonde man with the little finger missing off his right hand.

With no datum we were sent out to search as much of the reef area as possible in a day. We took off early, searched fruitlessly all day and returned just before dark. The SARO greeted us for a debrief and asked if we had found anything.

Somewhat browned off by the whole affair we told him that we had found a tall blonde bloke stuck on a reef, but when he waved to us we could see he had all the fingers on his hand so we ignored him. As an attempt at humour this went over like a lead balloon and we were told so in no uncertain terms.

The story doesn't end there. Some months later we were told the Dutchman had bought neither boat, but had changed his mind about sailing and had flown home instead. By then, no one cared.

Fortunately, most things we did made far more sense – especially anti-submarine warfare (ASW) training. The SP2H was equipped for this role and, for its time, was very good at it. There was much to know, but we usually got good results - and despite the noisy take-offs and much lost sweat, most of us thought 10 Squadron in those days was a good place to be.

ASW is a complex and expensive business but it was a necessity in the Cold War. The threat was the Red Navy, the navy of the USSR, the Union of Socialist Soviet Republics with Russia at its heart – and it was more than a bit mind-boggling.

The Red Navy was designed to fight NATO and the West, mainly by disrupting sea lines of communication vital to NATO and the West, but much less so to the largely continental USSR. Submarines were the platform of choice, backed by long-range, land based air, warships and anti-ship missiles.

Numbers were vast – they had some 400 submarines in 1960, with 90 in the Pacific, mostly at Petropavloysk on the Kamchatka Peninsular. As more nuclear submarines entered the fleet, numbers dropped to a still huge 360 or so in 1970 – the US Navy, by comparison, then had 145 submarines.

Russian submarines varied in quality, but they all worked, all had effective weapons and some were very good. And there were lots of 'em. The Red Navy had a saying that 'Quantity has a Quality of its own' - which in this case was absolutely true. By all measures, we in the West were outnumbered.

Australia had no submarines until the first of six Oberons arrived in 1967 and we exercised with on-loan RN submarines throughout the 1960s. Compared with later submarines like the Oberon, these RN submarines were old and noisy. This suited us just fine, for the SP2H was equipped with a system called Jezebel, that worked best against noisy targets.

With submarines and ships, the sound came mostly from engine noise, hull resonance, propeller noise and things like pumps and compressors. By breaking out the individual frequencies in this sound, Jezebel, produced two very valuable results – much increased detection ranges and target identification.

It concentrated on low frequency sound as it travels furthest in water. Aircraft-launched sonobuoys with underwater microphones called hydrophones were used to detect the sound and transmit it up to the aircraft. The individual frequencies were then identified by special processors in the aircraft and shown on a gram. Each ship or submarine type produced a unique frequency pattern, called a signature, used by Jezebel operators to classify contacts.

On a lighter note, I never found out why it was called 'Jezebel'. It was a boon to us, a reliable ally, but the Jezebel of public perception is anything but. The biblical Jezebel is a cunning, ruthless, reprehensible woman typifying evil, and a popular 1950s song declared: *If ever a devil's plan, was made to torment man, it was you, Jezebel it was you.*

The mystery remains for me. While it is true that long, all night Jezebel searches in bad weather were never sheer, unmitigated fun, they were not torment either, and we were very pleased to have her aboard. Submariners, no doubt, held a different view of the lady, and perhaps the name had them in mind.

Submarines then were virtually all diesel-electrics. The diesel engines were used when surfaced to power the boat and charge the batteries, which in turn were used to drive electric motors when submerged. Early models – including some in WWII - had to run on the surface to use their diesels and replenish air.

This made them vulnerable, especially after radar was invented, and the clever Germans came up with a fix – the snorkel mast, essentially a system that drew in air and discharged exhaust gases while the submarine was just below the surface. A snorkel fitted submarine could therefore recharge its batteries without surfacing, and could deep-dive more quickly than a surfaced boat.

A submarine using its snorkel mast to re-charge batteries was said to be snorkeling or snorting. And while it was harder to see than a surfaced boat, it was still detectable from the wake created while snorting and the mast itself sticking out of the water.

By the time we got involved all conventional (ie, non-nuclear) submarines had snorkel masts. On operations, they would

maximize 'quiet running' on batteries but eventually had to 'snort' to run the diesels and re-charge batteries. Only then did they make enough noise for us to detect them on Jezebel.

Nuclear submarines obviously didn't have to surface but they were quite a bit noisier (especially the early models) and could be detected at very useful ranges. Indeed, most Soviet submarines were then quite noisy and a single aircraft could search thousands of square miles covertly at height – in our case usually six to eight thousand feet.

Jezebel was a simpler version of a much larger and more sensitive system called SOSUS (Sound Surveillance System) using large fixed hydrophone arrays on the seabed and providing bearings as well. A number of SOSUS arrays in the Pacific detected Soviet submarines and provided position information for further action by aircraft using Jezebel.

Most Soviet submarine activity was north of the equator, with the ballistic missile firers operating well to sea off the North American coast. In the 1960s the US Navy, Canadians (and probably the Japanese) spent hundreds of thousands of hours tracking them with Jezebel using SOSUS datums, but we only got involved when exercises took us into the area.

The SP2H, however, was equipped for such work, with a similar ASW fit and the same tactical displays as the P3A Orions then being introduced into the US Navy. The tactical displays were fed by a doppler-based, automatic navigation system also used for normal navigation. With it, we could carry out complex search patterns over large and small areas, but it was not perfect.

The design concept was for an automatic system that would tell us where we were with little input from us, but that didn't happen. It was a big advance over earlier systems, but we still had to constantly check our position with traditional navigation techniques.

For this, we had Tacan, ADF, VOR, a sextant, a good drift sight, and a big 10 cm radar for quick fixes within range of land or reefs. Primarily a search aid, the radar was also used for weather avoidance and was fundamental to most missions. The down side was its size - along with all the other fancy kit it made an already heavy aircraft even heavier.

The original Neptune began operational life in 1947 as a purpose-built maritime patrol aircraft, with two radial engines (18 cylinder, 2300 hp, Wright compounds) excellent endurance and range, and good weapons capability. It had under wing hard-points and a bomb bay - which may explain why it was often called a Neptune Bomber by the press. In the RAAF it could carry rockets, depth charges, torpedoes, mines and things like sea-rescue packs – but never bombs.

The early take-off weight of 58 000 lbs increased as more and more equipment was added over time. To cope, the jets were fitted, and along with everything else produced a takeoff weight of 84 000 lbs for the SP2H. It still flew for some 12 hours, but this was quite a bit less than earlier models.

In retrospect, I suspect tasking authorities sometimes expected more from us – in terms of range and endurance - than we could deliver.

This may have worked in our favour. The best thing we did each year was RIMPAC, the annual Rim of the Pacific exercise

Feature

held in Hawaii. To get there and back we staged through places like Canton Island. But in doing so we accepted a big gap in the middle when we could not reach our destination or get back home on one engine.

We put on a brave face, but I was always relieved when we passed the point where we would not have to ditch if we lost an engine. This never happened and Hawaii was an annual highlight for those who went. Travel then was much more expensive than today and Hawaii was a top tourist destination with an exotic reputation. If you hadn't been, you certainly wanted to go. And few of us were disappointed.

Australia was then still very much a Monday to Friday place, with most things shut at the weekends, but like most of the US of A, Hawaii ran almost 24/7. And the beaches, climate, scenery and bikini clad girls were pretty much as advertised – in other words, very nice. Some things were below par – the local beer, for instance, was weak and too often warm – but to young Aussies in those days it was a great experience.

The most memorable aspect, however, was the military presence. On the island of Oahu, where we were based, there were four large military airfields – Army, Marines, USAF and Navy – and the fleet in Pearl Harbour. All the airfields housed several squadrons, and all were busy.

Indeed, it was rare to look to the sky and not see an aircraft. Total airpower in Oahu, especially if a carrier was in dock, was much more than all the airpower in Australia - as was the number of warships.

RIMPAC too was a big affair. Like most exercises it included work-up exercises followed by a mock war between Blue and Orange forces bearing a remarkable resemblance to our lot and the USSR. We did similar things at home, but the sheer scale of RIMPAC was new to most and took time to get used to.

We were based on the Naval Air Station, Barber's Point, and they looked after us very well. Each of us was sponsored by a USN man with a similar job and marital state. This was excellent for single Aussies who were quickly introduced to the better watering holes and night-spots.

It also helped solve my transport problems. Barber's Point was some miles from Pearl City and Honolulu where most of the action was and getting to and fro – especially in the wee small hours – could be a problem.

My sponsor was a southerner and an all round good guy. He and another member of his Neptune crew had to spend time away, so they left me the keys to their cars -a VW beetle and a Chevy Hardtop with a massive V8 and a row of dual throat carbies down the middle of the block.

I had an Austin Healy Sprite at the time and couldn't wait to try this machine from the extreme opposite end of the automotive spectrum. As expected, it was awesomely powerful compared with my little car. It did have a few weaknesses though. The steering was seriously vague and I think it had the same size brakes as my tiny Sprite. They worked once, not well, and again only after some minutes cooling down. Until then, everything was rather rubbery and ineffective.

And it was thirsty. Petrol on the US mainland was quite cheap in those days, but not in Hawaii where it was all imported

and heavily taxed to discourage consumption. A single filling of the gigantic tank on the V8 Chevy cost me almost half a week's pay. It had been a unique experience, but not one I could continue, so I drove to the car park, locked the massive machine, and used the VW until its owner returned.

RIMPAC gave us excellent exposure to life in the big world of Maritime Warfare. But you had to know your own basics before you got there. Otherwise, with so much new knowledge, it would have been like the old cliché of drinking out of a fire hose.

These basics were learned in what, now I look back, was an excellent operational training system we then had in Australia. It started on squadrons with conversion training and annual categorizations, and then moved on to training against a real submarine.

Called Sub-exes, these pitted squadron aircraft against a cooperating submarine with which we could practice Jezebel searches and follow-up tactics to produce a fix accurate enough to track or attack. This was done with a Jezebel subsystem called 'Codar' (which produced short range bearings from broad-band sound), or with radar and visual searches.

If the submarine then dived, we could do underwater search and tracking with passive sonobuoys and small explosive charges to generate echoes off the submarine. The usual search pattern used seven buoys in a circular pattern covering up to 30 square miles in good water conditions.

The system was called Julie – because it made passive buoys active – and worked quite well. It did, however, need a well worked-up crew and lots of tight turns to lay the pattern and to re-bomb selected buoys. This made life uncomfortable for everyone down the back, especially the poor bloke loading the sonobuoys.

It was not unusual to see him sink to his knees with a sonobouy in his arms as the 'g' came on during a tight turn. In later years, Julie was replaced by active buoys that generated sonar 'pings' at regular intervals. This greatly increased the data rate and much reduced the need for tight turns – two very welcome things.

Sub-exes were usually in the East Australian Exercise area off Jervis Bay. At least one major Australian exercise was held there each year, usually with New Zealand and USN participation, and some smaller ones.

Most would begin with a week at AJASS, the Australian Joint Ant-Submarine School at Nowra, to learn about joint operations and brief for the exercise. The AJASS staff were all seasoned operators who included an experienced USN submariner. The blend of lectures, syndicate problems and tactical floor exercises was a great way to learn, and the mix of instructors and course participants was hard to beat.

After a week at AJASS, we did work-up exercises with RAN ships and helicopters, then the excellent Westland Wessex. It had an active 'dunking' sonar, a ball let down during hover to provide range and bearing or passive listening. It could not search large areas, but was invaluable for short-range tracking and attacks.

Submarines usually found a Wessex very hard to shakeoff, and we would call them in whenever we could to help refine our datum and set us up for an attack. This we did by overflying the Wessex and releasing a torpedo on its direction or on a MAD contact.

(MAD was the Magnetic Anomaly Detector that sensed changes to the Earth's magnetic field made by large metal things like submarines. It provided a clear signal when ontop a submerged submarine and with it good criteria for a torpedo attack.)

Care had to be taken when overflying the helicopter not to go too low, 'take his lift' and turn his hover into a ditching. This was obviously undesirable, and if we were even a smidgen too low, we were invariably told so in clear and concise, if not always polite, terms. Can't say I blamed them.

With limited resources in big oceans, Australian ASW efforts focused on harbor approaches and surrounds, choke points and protection of convoys. WWII experience was that convoys were the best way to counter conventional submarines in the open ocean. Analysis showed that this was still true, and in Australia we devoted much time and effort to this demanding task.

With no long-range weapons, conventional submarines of the day had to close to attack. Knowing this, planners drew up 'limiting lines of attack' for different submarine types, most of which had to be ahead of the convoy to mount an attack. Consequently, when working with the fleet we were usually placed ahead of it, searching an area based on the 'limiting lines' and their surrounds.

The fleet usually included the carrier HMAS Melbourne with Wessex helicopters and, initially, fixed wing Fairey Gannets. The Gannets, while better than nothing, were showing their age with limited endurance and few modern search aids. They were replaced in 1967 by the excellent Grumman S2E Tracker, a quantum leap in capability with virtually the same ASW fit as the SP2H and good endurance.

The mid-1960s began a Golden Age for Australian ASW that continued into the 1980s with the Wessex replaced by Sea Kings and the older P2E Neptunes by P3B Orions. These changes meant that for some two decades, Australia had the best ASW capability it had ever had - or ever would have.

When the Soviet Union collapsed it was hard to justify this expensive capability against a much-diminished threat and resources devoted to ASW were reduced. From a bean-counter perspective, this made good sense. As noted previously, ASW is a costly business. During WWII, for every man in a submarine there were at least 30 men in ships, aircraft and other assets trying to counter him.

By the 1980s, most of us thought that the figure was even higher as submarine developments outstripped our ability to counter them.

Few weapons systems elicit the disproportionate response of submarines. Their peace-time roles are usually restricted to intelligence gathering, training others and deterrence. But if things get serious, they have no peer.

Once at sea they are very hard to find and the mere threat of their presence is a strong deterrent; they are not called 'black tubes of death' for nothing. If logic prevails, a bigger, better submarine fleet will be part of tomorrow's ADF.

But I am getting ahead of myself. Fortunately, we never had to protect a convoy against the Red Navy or one of its allies. The nearest I got was Exercise Trimdon, flying ASW missions in support of HMAS Sydney on its way to Vietnam. Nick-named the Vung Tau ferry, Sydney did a number of trips to Vietnam carrying everything from guns to beer.

A torpedo from an Asian Communist Zone submarine was obviously a possibility and we were sent north – to a USN air station at Sangley Point in the Philippines - to help prevent this. From there we flew area searches ahead of the Sydney as it sailed in the 'danger zone', but detected nothing. Given the possible targets – all fairly noisy older Soviet types – we felt it was reasonable to thus assume there was nothing. I believe history bears us out.

Trimdon was later declared active service, but for us it was actually all rather hum-ho once we settled into the task. The stay in the Philippines, however, was anything but hum-ho. To most of us it was another world – westernized but still very Asian, crowded, very poor in parts and downright dangerous compared with today.

Murders were commonplace. The press was very free and didn't hold back. One day's issue of the local paper reported 17 murders, along with lesser crimes like hold-ups. Private security men were everywhere and, like the police, carried guns. So too did many ordinary citizens - if the sign in a local bar ordering 'patrons are to deposit fire arms with the barman' was anything to go by.

Luckily, the local villains 'thought locally, not globally', and largely ignored us. As I recall, we had no serious gun related incidents - although we managed to explore the local area quite well, including a trip to the University and Old Manila, both attractive tributes to their Spanish builders.

Another Spanish legacy was less visible and much less desirable - a class system that entrenched people with Spanish background at the top of the economic and social pile. Things are much better now, but crime and corruption is still a problem and the Philippines remains an enigma – an at times nasty and corrupt country with pleasant and honest people everywhere.

After Trimdon we had planned – for reasons I can't recall – to return to Townsville via Lae, at the western end of the Huon Gulf in PNG. Enroute we learned that Lae and surrounds was completely clagged in and diverted to Manus Island, north of New Guinea.

An important WWII base, Manus had a good runway and stocks of fuel stored there for just such an eventuality. The fuel (115-145 Avgas) was in 44 gallon drums and transferred to the aircraft with a hand pump. This was a big job. I think we needed at least 800 gallons to go on to Townsville, probably more. I can't recall the actual amount, but it added up to lots of 44-gallon drums.

The refueling crew were dressed only in shorts or loincloths and some had nose-bones, but they knew what to do and set about their task manfully, taking turns to pump the fuel high up into the wing. It was hard, sweaty work but they were nearly done when a second Neptune landed.

This was clearly an unwelcome development. Faces fell at

the sight of a second monster aircraft, and fell even further when we told them we were only the first of four. It took time, but all four were eventually re-fueled and flown uneventfully to Townsville.

PNG was still Australian territory and we did occasional exercises out of Port Moresby, staying in colonial style hotels with maintenance and admin run from tents on the airfield. The Australian influence was obvious in the hotels. Steaks were available along with local seafood, and the local beer, South Pacific Lager (motto: Be Specific, say South Pacific) was indistinguishable from the better brews back home.

Flying in PNG is famously a challenge, with tropical weather and lots of high ground. So, although we never flew to areas like the highlands, we did fly over the Owen Stanley Range and started bright and early before the cloud built up. Here, we were not alone. At first light every morning, scores of aircraft parked around the airfield all started up and took off asap to take advantage of the clearer morning air. The activity was frenetic for a short time, after which the airfield was almost deserted.

Weather is, of course, always a factor in flying, but no account of these times would be complete without a few words on my first exposure to the tropical type. I'd lived in Townsville previously and knew how much rain a tropical storm could drop in a short time, but had not seen things from an aviator's perspective.

Winter weather in Townsville is perfect for flying, with warm temperatures, light winds and little or no cloud. Like all the North Queensland coast, it has big storms in the 'wet', but these don't tend to linger. In my three years there, on return to base we seldom had to hold more than 30 minutes before landing.

This was not so with some other regional airfields that could be closed for hours. This better flying weather was no doubt one of the reasons Townsville was a major Allied air base in WWII. Consequently, the weather in tropical places like Darwin and PNG was more often a problem. But the most memorable weather I saw was in the South China Sea.

It was fifty years ago, yet I still remember it well. While transiting at about eight thousand feet, we flew past some gigantic, towering cloud columns, with bases at roughly our height. The tops were too far up to see, but, according to the met report, went to 50 000 feet or more. In other words, the clouds were eight miles high (that's about 13 kilometres if you are under 50). An extraordinary sight.

They were still growing, sucking in vast amounts of warm humid air. As it rose and cooled, the humid air condensed into water and released the energy needed to hold the cloud up and grow it. With time, this process would become less effective and water in the cloud would fall in huge quantities. We didn't see that - all we saw was these vast towers of water droplets floating around in the air; one of nature's great shows.

Speculation immediately turned to how much each cloud weighed. No one knew, and it was some years before I found out that the biggest of them may have weighed up to three million tonnes, and quite a few a million or thereabouts. The amount of energy involved is obviously huge, and helps

explain why even quite small thunderclouds can toss an aircraft about like a leaf.

Happily, these monsters were rare, although the big ones we had to cope with on a regular basis could not be ignored. At times, we could not fly where we wished because of storm clouds in the area - and even when there were no storms, we still needed good visibility for some things. This was especially so for some of our non-military tasks.

One such task came up every few months when we dropped supplies to the three men manning the weather station on Willis Island, way out in the Coral Sea. There were three because three could manage the isolation better than just two. They were at first provided with a boat for fishing in the lagoon, but when one man tried to row the 450 kilometers to the mainland the boat was taken away.

Some tasks were quite unusual. On one occasion we guided rescue craft to a large Japanese fishing trawler stuck on the outer reef with damaged refrigeration equipment leaking gas into the ship. It was quite remote and took some days of effort, for which the squadron was thanked officially by the Japanese Government – much to the chagrin of one of our older members who had spent time as a Japanese POW and had some very un-PC things to say, including his distaste at having to help at all.

On another, we searched (unsuccessfully) over land for a missing stockman after continued heavy rain had turned much of the area into swamps and lakes and cut off roads and tracks over a wide area. Possibly the oddest task I was part of - apart from the Dutchman with the missing finger, that is.

Each year we flew support missions for Sabre ferries from Townsville to Darwin. The Sabres could just make it with favourable winds and spent much of the flight over country no one would wish to eject into. This was especially so when flying over the southern edge of the Gulf of Carpentaria.

During the wet, much of the region is so flooded the coast virtually disappears and can only be located by the occasional sand dune or tree sticking up above the water. Any rescue would be nigh on impossible over land, and crocodiles, box jelly-fish and mosquitoes abound in countless numbers.

Our job was to provide a mid-course fix and to drop a survival package to any unfortunate forced to eject. To do this, we took off well before them and circled Mornington Island at the bottom of the gulf, chatted as they passed overhead and stayed there until they were well on their way.

Happily, all the Sabres in my time made it to and from Darwin – which is probably just as well. I saw few parts of the world I would less like to survive in than south of Mornington Island in the wet – or the dry, for that matter.

Many of our searches took us out over the reef at low level, giving us an experience few tourists could get. What we saw is seen regularly on TV today, but back then it was a rarity and something special. If the seas were calm, we could see down into the lagoons and catch glimpses of things like turtles and rays. Sharks were everywhere in such numbers I abandoned all thought of scuba diving - despite assurances from local divers that the well-fed sharks had no interest in scrawny humans like me. But most of all we got a feel for the vast size of the reef. Even from height, it stretched away further than the eye could see, more brown and yellow than the blues and greens I'd expected, seemingly endless and always arresting.

We also did survival exercises on the reef. The best of these was a day of dingy drills in a lagoon - always a great experience as we looked down into the crystal-clear water, floating above a giant aquarium few people in those days got to see. The other option, and not always so good, was some days on an island with just a ration pack and a few survival aids.

The most memorable aids were the de-salting kit that turned clear salt water into grey salt water and solar stills – blow up clear plastic spheres designed to trap heat from the sun and to catch the resultant evaporation from salt water poured in the top. Well, that was the theory. I could never get my still to work and succeeded only in turning cool seawater into hot seawater.

This should not have been a problem. Our survival island had been chosen because it had a water hole, with, we were told, a pretty waterfall. The island also had goats, thoughtfully placed there for shipwrecked sailors. A veritable tropical island paradise.

The reality was very different. When we arrived a long dry spell had stopped the waterfall and shrunk the water hole, which was now so fouled by the goats that it defeated our usually reliable water purification tablets. Mosquitoes, however, could still breed there and did so in large numbers, coming out at dusk and dawn to suck our blood.

Like all good tropical islands, there were coconut palms. Lacking adequate water we eagerly drank coconut juice, only to find it was a very effective laxative if we drank too much. As you might guess, I have had better weeks and my happiest memories are of the trip back to Townsville on the crash boat.

Such activities were memorable, but took only a few days of each year. Our Cold War roles of ASW and Maritime Warfare training and operations were our main work. They demanded most of our time and took us to many and varied places. Some have already been mentioned, and when I left 10 Squadron in late 1966 I had also visited New Zealand, Singapore and Malaysia.

In just over three years I had seen more of the world than most people I knew could then see in a lifetime. The SP2H gave me the chance to do so and introduced me to the complex and fascinating Maritime Warfare World. For both things, I am grateful – they helped shape my life for the better.

Article by Doug Hurst



F-111A Training Missions to Remember

Four RAAF crews well remember a particular training mission each was programmed for when training on USAF F-111A aircraft at Nellis AFB, LAs Vegas, in 1968. While there were 24 x RAAF crews training at Nellis at the time, only four of five were scheduled for a mission on the night of 11 September 1968.

The missions were programmed as WSF-11 and called for low level bombing at Range 3 in the Nellis AFB Weapons Ranges to the north west. The missions were the last in the training and conversion for the 1st Course of RAAF F-111C ferry crews before they were to pick up their F-111Cs at the General Dynamics factory at Fort Worth, Texas. But, that is another story.

The mission brief - and it was just that, brief and lacking in any details and advice - was for 4 x F-111s to depart at last light for Range 3, join up in the range pattern with limited visual contact, and release six bombs each on the same target, at 500ft AGL, with each F-111 separated by five to six miles in a 'trail' range pattern. Separation was to be by visual means using the anti-collision rotating beacon and then air-to-air TACAN for spacing as the sun set. Seems straight forward, but it was anything but .

The target was on a salt pan at an elevation of 2500ft about 10 n miles to the north of the range proper, with a 4000ft hill four nautical miles past the target. The other interesting aspect was that to reach the run-in to the target required a right hand pattern and the elevation of the mountains on the downwind leg was about 9000feet. So - downwind at about 10,000 ft, a 180 degree right hand turn to reach the heading to the target, losing 8000ft in the turn, down to 500ft AGL, release a single bomb, then a lot of power and a sharp pull-up to clear the hill on the extension of the run-in track, turning right through 180 degrees and climbing to 10,000ft again for the downwind leg for the next run. And, there were another 3 x F-111As in the pattern; each crew did this six times.

Things that were a bit disconcerting to the crews were the rotating beacon flashing off the mountain above them when descending in the turn to reach the release profile of 1000 ft AGL - but to achieve that release point, stabilised, crews had to descend to 500 ft on the run in because of the slope down to the target

At the post flight debrief, many USAF instructors were there to see how the Aussies went. When the USAF instructors (IPs) were asked how did the other USAF conversion crews go, they said - "You guys are the first". But, they still thought the Aussies were a bit 'woosey' as the USAF pilots had used the range on dive attacks in daylight. They then decided to fly sorties the next night to 'prove' it was OK. However, two



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Feature



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14 CENTURY September 5, 1968



FIRST AUSTRALIAN CLASS - The first Royal Australian Air Force men to train in the F-111 were graduated last week. They are: (front row left to right) Flight Lt. E. J. McCormack, Flight Lt. F. E. Burtt, Squadron Leader T. D. Wright, Flt. Lt. P. J. O. Hockett, Flying Officer C. J. T. Lake and Flt. Lt. L. R. O'Neill. Back row: Sq. Ldr. D. R. Marks, Sq. Ldr. J. I. Thomson, Wing Commander H. A. Hughes, Flt. Lt. L. J. Helvorson, Flt. Lt. W. F. Walters and Flt. Lt. R. J. Montgomery. The officers are now in Fort Worth, Tex., to receive their country's first F-111s and prepare to ferry them back to Australia.



aircraft flew to the range to carry out the same range pattern, but they did but did not even finish the bombing "because it was too dangerous". The RAAF senior officer at Nellis, and who flew one of the F-111As, was the then, WGCDR 'Bill' Hughes. He made the USAF very aware of his opinion at the lack of USAF judgment in scheduling such an exercise at night with crews under training, in such a 'challenging' pattern.

In later years, the RAAF crews who went on to gain a lot of F-111C experience back in Australia, often ponder this experience and consider that the briefing and flight preparation could have been handled more professionally by the USAF instructional staff.

The RAAF crews handled it most professionally. It was not a coincidence that all the RAAF crews involved in the F-111A sorties had recently completed tours in South Vietnam with No 2 Squadron where a large part of their flying was at night; not the same as the Nellis activity, but similar.

By one of the crews that night, Wally Walters/Lance Halvorson, and Errol McCormack and Ron Biddell, two of the pilots on the same night exercise.







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Feature

ANZAC Day Cake





Images on Computer

The images that are required for the cake must be loaded onto the computer ready to be printed on the dedicated image printer. This printer has food dyes in the printer cartridges.

Edible Image Sheets

The Image printer is pre loaded with edible image sheets. Images are sent to the printer.

Applying image to the cake

Layout the design

Mark the area where the image will be placed on the cake. Using a damp pastry brush, moisten the marked area.

Smooth the image over dampened area making sure there are no air



Squadron Cakes by Colin Gardner

The cakes made by No 2 Squadron veteran, Col Gardner, are well known to his association mates as he has made a number of commemoration cakes



Cake made for the 2SQN reunion in Canberra 2007. Photo of deployment crews to Phan Rang, South Vietnam, April 1967 *Photo: 2SQN Association*

over the years. Col was the 2SQN catering specialist at 2SQN in Vietnam in 1967-68; we all 'survived' his culinary preparations.



Cake with 2SQN badge with Unit awards ribbons Photo: 2SQN Association

The photos are printed on rice paper and are edible. Examples of his cakes made for No 2 Squadron reunions are shown below:



Cake with Canberra aircraft flown by 2SQN in South Vietnam. Photo: 2SQN Association

History

Battle of the Ruhr



No 467Squadron crew, August 1943

The Battle of the Ruhr was the first of three major campaigns launched by RAF Bomber Command during 1943 and the campaign was aimed at crippling the industrial heartland of Germany. The Ruhr Valley -- nicknamed 'Happy Valley' by bomber crews -- was difficult to attack due to the haze generated by industrial plants and the concentration of antiaircraft defences. The Battle of the Ruhr started on 5 March 1943

Radar-equipped German night fighters exacted a heavy toll on the attacking bombers. The offensive opened on this day when 412 aircraft -- including 33 from Nos 460, 466 and 467 Squadrons - raided Essen, a major industrial centre that was vital to the German war machine. From March until July, between 300 and 800 aircraft raided the cities of the Ruhr Valley.

The Battle of the Ruhr included the famous "Dambuster" raid on the night of 16/17 May 1943 against three dams in the Ruhr valley. Thirteen Australian airmen -- four piloting aircraft -- flew on the Dambuster raid with two Australians killed and one forced down and captured; most of these airmen were members of the RAAF attached to the RAF although one of the pilots was an Australian who joined the RAF before the war. No 460 Squadron -- flying Lancasters and manned predominantly by Australians -- flew over 600 missions over 46 nights losing 29 crews which was more than its total strength when it commenced. In total, Bomber Command flew over 11,000 sorties against German infrastructure in the Ruhr and Rhineland.

RAAF Official Motto

On 18 April 1932, the order was published which made 'per ardua ad astra' the official motto of the RAAF. Australia's Chief of the Air Staff, Air Commodore Richard Williams, had first raised the idea of finding a suitable motto in late 1928, expressing his preference for something different to the RAF.

After unsuccessfully seeking suggestions from Latin scholars at the universities of Sydney and Melbourne, the Air Board

decided in October 1929 to conform with other dominion air forces which had adopted the British motto, and the process of securing royal assent was put in train. In February 1932 the Australian prime minister was notified that approval had been granted, and the order promulgating the change followed two months later. Various meanings were ascribed to per ardua ad astra over the years, but in 2002 the Chief of Air Force formally accepted 'Through Struggle to the Stars' as the RAAF's translation.



Comment: The motto was approved for the Royal Flying Corps in March 1913

RAAF Liaison Staff Changi Office



RAF Changi, 1966

Following the completion of the new runway at Butterworth, the RAAF Liaison Staff Malaya office, at RAF Changi, Singapore closed on 31 May 1958. Established in September 1955 to support No 2 Airfield Construction Squadron -- which was building facilities at Butterworth, Malaya -- the office staff of seven supervised the Butterworth program, and processed personnel posted to Butterworth who arrived in Singapore by ship.

With the completion of the works at Butterworth and the arrival of No 2 Squadron, with Canberra aircraft and later with the arrival of Sabre aircraft, the office was closed.

Members and their families arrived at Butterworth on civil air flights, passenger ships and charter flights.

History



The TAA fleet - in the late 1950s

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Australian Air League

Qantas Boeing 747-400 Still Setting Records

By Sgt Bronwyn Smith

In 1989 Qantas' first-ever Boeing 747-400 VH-OJA flew into the record books with the world's longest non-stop commercial flight from London to Sydney. 26 years later the same aircraft again made history with the shortest flight, from Sydney airport to her final resting place at the Illawarra Regional Airport where she will go on public display with the Historical Aviation Restoration Society (HARS). Thousands of local residents and aviation enthusiasts turned out to see the aircraft land at Wollongong, and the cadets and officers of the local Australian Air League Squadron were fortunate to have a front row seat.



Qantas Boeing 747-400 VH-OJA shortly after arriving at Illawarra Regional Airport

On the Sunday 8th March 2015 a Qantas Boeing 747-400 made history when it landed on RW16 at Illawarra Regional Airport. The flight was widely publicised and generated much interest from the public, with an estimated audience of 50,000 local residents and aviation enthusiasts turning out to see it. The crowd cheered when VH-OJA first came into view and burst out into applause when it landed only a few minutes after its scheduled arrival time of 0747hrs.

This aircraft is the first Boeing 747-400 in the world to be preserved for public display and will be the largest aircraft on display at HARS. The aircraft will sit alongside a Lockheed Super Constellation, Catalina, Douglas DC-3 and DC-4 and Neptunes helping to create a local tourist attraction as well as preserving a bit of our Australian aviation history.

In August 1989 VH-OJA "City of Canberra" flew non-stop from London to Sydney for its delivery flight, with the trip taking 20 hours, 9 minutes and 5 seconds – a record that still stands today. Qantas chief executive Alan Joyce said "The spirit of innovation that led to that historic and record-breaking flight, still drives us today". The flight from Mascot to Illawarra Regional Airport took approximately 10 minutes, making it the shortest domestic flight recorded on a Boeing 747!

As a member of the Australian Air League it was absolute breathtaking watching both the landing and the handover. Having the opportunity to speak to the pilots, working in a job that they truly love was inspirational both to myself and my fellow cadets, and learning that one of the pilots had once been a cadet of the Air League just shows that I and so many others are taking the right first steps to pursuing our dreams.

After the aircraft had landed and taxied to its final resting place, I was fortunate to be allowed on board VH-OJA along



Cadets from the Australian Air League speak to one of the pilots about his historic flight

with a fellow Air League cadet and two of our Officers. Walking up the stairs (specially brought down from Sydney airport for the day!) and boarding the aircraft we were able to speak to the pilots and ask them questions about the flight and their roles with Qantas. We were shown around the business class and upper deck, and then on to the cockpit where we were able to sit in the pilot and co-pilot seats and look through the escape hatch, giving a wave to the crowd below. The pilots ran us through the many controls and happily answered our questions. We were also presented a "gift", the printed weather reports that they used for this final historic flight.



Sgt Bronwyn Smith and Cadet Danial Jones-Morley at the control of VH-OJA

The Boeing 747-400 will open up many opportunities for local tourism and will make many more people aware of aviation related activities. It really goes to show that with the right mind set anything is possible and speaking to the pilots of VH-OJA's final flight has given me further encouragement to pursue a career in aviation. We would like to thanks Qantas and HARS for providing us a truly memorable day.

Sgt Bronwyn Smith is a cadet with the Albion Park Squadron of the Australian Air League and was the 2012 Cadet of the Year. She is also a student pilot.

Further information on the Historical Aviation Restoration Society can be found at http://hars.org.au

For further information please contact: Australian Air League Phone: 1800 502 175 Email: info@airleague.com.au

Briefing Room

Bomber Command Commemorative Day

The Commeration was held this year at the Australian War Memorial, Canberra, on Sunday 31May 2015 at the Bomber Command Memorial in the Western Sculpture Garden at 1100. 2015 was the 8th Anniversary of the Commemorative Days, the purpose of which is to remember the aircrew and ground crew who made the supreme sacrifice and to all those who served in Bomber Command during the Second World War. In addition to remembering their squadron mates who didn't return in World War II, the veterans also remembered all those who served at Gallipoli and the Western Front in the Great War 1914-1918.



Veterans held a Meet & Greet on Saturday 30 May 2015 in the ANZAC Hall of the Australian War Memorial (near "G" for George.) and a lunch at the QT Hotel on Sunday 31 May after the ceremony. The previous National Secretary, Ron Usher, laid a wreath on behalf of the National President, RAAF Association, AVM Brent Espeland (Retd). The CAF, AIRMSHL Geoff Brown, was Guest of Honour at the luncheon, during which he gave a short talk on the RAAF Super Hornet operations in Iraq. Also in attendance was the CAF Designate, AVM Gavin Davies and the previous National President RAAF Association, AVM Roxley McLennan and his wife, Loretta..

Remember the Fallen

As part of the marking of the centenary of the Gallipoli landing, members of RAAF Base, East Sale, and the local community gathered for an ANZAC Day service at the Sale War Cemetery.

The heartfelt service was unique as it involved current serving members standing behind each of the 58 gravestones of servicemen and women buried at the site while poppies were laid. This was done to ensure that they were not alone during the service that commemorated their sacrifice.

Adding to the service was a poem written by Marcus Hill, a resident of Sale during World War 2, titled *Listen to the Stones*, which was inspired by the gravestones and the inscriptions on them.

Mr Hill's poem, which is also given the unofficial title of "The Airman's Poem' was not only used at the Sale War Cemetery service, but at various centenary celebrations run by the RSL Mr Hill, who attended the service, said he couldn't recall a more moving event, with RAAF personnel standing by each headstone.

"The connection between the present and the past was decidedly poignant and we felt that there was almost a sense of resurrection in the air,' he said.

"To generate such an image was a rare achievement and we would like our appreciation to be made known. And, not to be forgotten, is the young man who read out *Listen to the Stones* so well.

"That poem rightly belongs to that place and the people who rest there."

The service bought together the local Sale service and civil communities, with RAAF Base, East Sale, senior leadership represented by Wings-Commander Roland Morscheck and Wing-Cdr Jim Svede.

Wellington Shire Mayor Carolyn Crossley and police superintendent Geoff Newby represented the community.

The Service also included a catafalque party, flypast and wreath laying, as well as the ANZAC *Requiem*.

75 Year AAFC Celebration Activities/ Functions

AIR Training Corps Reunion

The Australian Air Force Cadets, formerly known as the Air Training Corps, will celebrate its 75th year anniversary in 2016. 6Wing/SA AIRTC wishes to locate past staff to join in the various functions throughout the year. Please contact Graham Evans on 0419804418 for further details.



Centurion Pilots Courses

2FTS Pearce invited 'centurion' pilots who graduated on Course Numbers 39 and 139 to attend the graduation parade of Course 239 which graduated on 5 June 2015. Members interested in the graduation please contact Karyn Hinder at either 1300 333 362 or Karyn.Hinder@defence.gov.au.

Invitations are extended to graduates of Course Numbers 240 and 241. The graduation dates for these two courses are 4 September 2015 and 4 December 2015 respectively.

For planning purposes, graduation dates for other courses in 2016 are:

242 - 11 March 2016

- 243 3 June 2016
- 244 2 September 2016
- 245 5 December 2016

For the old and bold, the 'double century' graduation courses are occasions to catch up with old mates and to meet graduates of current RAAF pilots' courses. Be assured, it will be an eye-opener.

Briefing Room

Vietnam Veterans Museum - Phillip Island

A band of competent volunteers at the Vietnam Veterans Museum at Phillip Island is restoring Canberra A84-307. They are also in the process of restoring 204, a Mk21 trainer that flew from Butterworth to Phan Rang on a few occasions for renewal of pilots' Instrument Ratings (IRTs). It also was used to transport VIPs on visits to Phan Rang and therefore has some association with both No 2 Squadron and Vietnam.

The Museum, of which AVM Alan Reed (Retd) is the patron, is seeking funds to aid in restoring the aircraft. In addition, the museum is also looking for more "Friends of the Museum" as well as donations of relevant Air Force display items. The aviation section of the museum is being expanded and the Museum would like to have a stronger aviation influence. Your help would be appreciated.

View information on the museum at: https://vietnamvetsmuseum.org/node/build-bomber







U.S. Air Force Close Air Support Aircraft and Munitions

	A-10	mater	B-1	B-52	F-15E	F-16 Block 40/50	F-22	MQ-1 Predator	MQ-9 Reaper	F-35A ²
		AC-130W1								
MUNITIONS		20 - 12 22 - 12		64	x			1		NN NA
GBU-10 2,000-lb. laser-guided Paveway II	1		1	1	1	1				
GBU-12 500-Ib. laser-guided Paveway II	1		1	J	1	J		J	J	J
GBU-24 2,000-lb. laser-guided Paveway III	-				1	J				
GBU-28 5,000-lb. bunker buster				1	1					
GBU-31 2,000-Ib JDAM	1		1	J		J				1
GBU-32 1,000-lb. JDAM			1	1		1	1			1
GBU-38 500-Ib. JDAM	1		1	1	1	J			1	
GBU-39 250-lb. Small-Diameter Bomb		J			1	1	1			
GBU-49 500-Ib. Enhanced Paveway II				1					1	
GBU-54 500-Ib. laser JDAM	J		1		1	1				
Cannon	1	J			1	1				1
OPERATING COST PER FLIGHT HOUR (Fice 2013)	\$17,398	\$28,455	\$54,218	\$67,475	\$37,504	\$22,954	\$62,106	\$4,403	\$3,976	

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Assets and Your Property

An asset is any property or possession you partly or wholly own, including outside Australia, and debts owing to you. The value of an asset is what you would get if you were to sell it on the open market (less any debts or encumbrances owed against the asset). It is not necessary that there be a ready or willing purchaser of your property. If you are the partial owner of the property, the assessed value is the same percentage of the asset's cur-rent value as you own. The home you live in is not counted as an asset. The value of assets you can have and still receive the maxi-mum rate pension is called the assets value limit.

Different assets value limits apply for singles and couples and according to whether you own your home. A lower assets value limit is applied if you own your home and a higher assets value limit is applied if you do not own your home. Remember that if you are assessed under the assets test you need to tell DVA if you gain or dispose of any assets; or your total income increases above the income limit included in our latest advice to you. If you give away assets above the gift limits, the amount exceeding the gift limits is counted as an asset for pension purposes.

Deprived assets amounts are also deemed in the same way as financial assets, and so may affect your assessable income. In relation to giving away assets, you need to tell DVA the value of the asset given away; who you gave it to; the date that you gave the asset away; and any other changes to your income and assets as a result of giving the asset away.

This is a complex topic that requires careful attention. DVA has produced You and Your Pension – a comprehensive guide provided to income support pensioners including service pensioners, social security age pensioners (paid by DVA), and war widows and widowers who receive the income support supplement. The guide contains information about your benefits, rights and obligations. As well as being available in an electronic version on the DVA website www.dva.gov.au , You and Your Pension is also produced as a booklet and an audio version is available on compact disc. Contact DVA on 133254 or from regional Australia free call 1800 555 254 if you would like to receive a copy.

Your Pension and When You Need to Contact DVA

Did you know that if you are receiving a means-tested pension, you are obliged to provide information about any changes that could affect either your eligibility for the pension or the rate at which it is paid? For example, if you are informed that you are likely to receive an award, payment or settlement of a compensation claim, you are legally obliged to contact DVA to determine how this payment might affect your pension. You are obliged to notify DVA if you are already receiving a pension or other benefit and you are awarded compensation. If you do not inform DVA about a change in circumstance within the legal time periods, you will be asked to pay back any overpayment.

If you currently receive any DVA payment and your circumstances change

You are legally obliged to contact DVA in writing or telephone

to advise of any change in circumstances which may be relevant to compensation payments and any other DVA payments you are receiving.

Personal circumstances

You need to inform DVA if your personal circumstances change in a way that may change your eligibility to receive DVA payments, including if

- you marry or enter a de facto relationship;
- you divorce or separate;
- you reconcile with your partner or commence living on the same property as a separated partner;
- you and your partner have to live apart because of illness or infirmity;
- the person for whom you are a trustee or carer dies; or
- a child or student for whom you are receiving benefits leaves your care, stops being a student, starts receiving payments under an education scheme or stops being dependent on you.

Residential circumstances

You need to inform DVA if your residential circumstances change in a way that may change your eligibility to receive DVA payments, including if:

- · you change your address;
- you move to a retirement village, move within your retirement village, or into respite care, residential aged care or another care situation;
- you go overseas;
- you sell or rent your home or leave it for more than 12 months or transfer the title of your home to someone else;
- you are receiving rent assistance and you stop paying private rent, start paying government-subsidised rent, sublet from a government tenant or your rent reduces;
- you receive remote area allowance and you leave your home for more than eight weeks;
 your intentions to use your home sale proceeds to buy or build a new home have now changed;
- your intentions to use the insurance proceeds (from your damaged/lost home) to acquire a new home or repair your old home have now changed; or • your home sale or home insurance proceeds were exempted assets and you have now acquired a new home or your rebuilt/repaired home is completed

What happens to your pension when your partner dies?

DVA must be notified of the death of a pensioner or a Defence Service Homes Scheme borrower as soon as possible after the death. Depending on the situation, DVA:

- · cancels the deceased's pension and benefits
- pays bereavement payments to the surviving partner or estate
- reassesses the surviving partner's pension to the single rate
- notifies the Office of Australian War Graves;
- notifies the widow or widower or administrator of the estate of the potential entitlements or arrangements for funeral benefits (of up to \$2,000) and Defence Services Home loans;

- makes arrangements for any aids and appliances to be returned to the Department; and,
- upon request, arranges a final payment summary for taxation purposes.

The surviving partner's income support pension is reassessed and paid at the single rate. It is calculated using half of the amount of any joint bank accounts and joint investments in the assessment. You will need to let DVA know the gross amount of state or Australian Government superannuation and/or any overseas pension that you will receive following your partner's death.

We understand that when your partner's estate is finalised, the amount of your income and assets may be higher than the amount used to initially assess your pension. Therefore DVA will write to you following the death of your partner and again approximately 14 weeks later. Depending on your income and assets, the letter may also include a "Statement of Circumstances" review form.

If you do not receive a review form, you still need to tell DVA if your income and assets increase above the income free area and the assets value limit. While DVA staff working in Bereavement Units are not trained counsellors, counselling services are available to help you. The Veterans and Veterans Families Counsel-ling Service (VVCS) provides free and confidential, nation-wide counselling and support for war and service-related mental health conditions. VVCS counsellors have an understanding of military culture and can help to address a range of concerns following your partner's death. Contact VVCS on 1800 011 046 and get the support you need.

SERVICE PENSION	Old rate (fortnightly)	New rate (fortnightly)	Increase (fortnightly)	
Single person	\$854.30	\$860.20	\$5.90	
Couples (each)	\$644.00	\$648.40	\$4.40	
Single person- transitional	\$720.90	\$725.80	\$4.90	
Couples (each)– transitional	\$581.40	\$585.40	\$4.00	
WAR WIDOWS	•			
War widow(er)'s pension	\$868.00	\$874.10	\$6.10	
Income support supplement	\$256.00	\$257.80	\$1.80	
DISABILITY PENSION	•			
T&PI (Special rate)	\$1,311.30	\$1,320.50	\$9.20	
Intermediate rate	\$890.10	\$896.40	\$6.30	
EDA	\$724.20	\$729.30	\$5.10	
100 per cent	\$466.10	\$469.40	\$3.30	
10 per cent	\$53.54	\$53.87	\$0.33	
MRCA	Old rate (weekly)	New rate (weekly)	Increase (weekly)	
Wholly dependent partner payment	\$434.00	\$437.05	\$3.05	
Special Rate Disability Pension (SRDP)	\$655.65	\$660.25	\$4.60	

New Pension Rates From 20 March 2015

Australian War Memorial Council Appointments

Minister for Veterans' Affairs, Senator the Hon Michael Ronaldson, announced on 8 April 2015 three new appointments to the Council of the Australian War Memorial. Ms Josephine Stone AM, Brigadier Alison Creagh CSC and Major General Aziz (Greg) Melick AO RFD SC have been appointed to the Council for three-year periods.

Ms Stone has 20 years' experience as a solicitor and barrister and has also held the positions of Professional Standards Director of the Northern Territory Law Society and was the Chairman of the Red Cross Katherine Flood Appeal.

Brigadier Creagh has had a distinguished 30 year career in the Australian Defence Force and has held such roles as Director-General, Australian Defence Force Theatre Project, Director-General Strategic Communication and Chief of Personnel, Headquarters International Security Assistance

Force, Afghanistan. She is currently the Executive Director of the Spirit of ANZAC Centenary Experience, the national travelling exhibition supporting the Centenary of ANZAC.

Major General Melick has 50 years' experience serving in the Australian Army Reserve and is currently the head of the Centenary of ANZAC planning team. Major General Melick also has also served as Assistant Chief of the Defence Force (Reserves) and brings 40 years' experience as a solicitor and barrister to the role.

Senator Ronaldson said the three new appointments would bring a wealth of experience across the defence and corporate sectors to the Council of the Australian War Memorial. "I would like to thank outgoing members Major General Paul Stephens AO (Retd) and Dr Allan Hawke AC for their service to the Council. I also acknowledge the service to Council of Lieutenant General David Morrison AO whose term will expire upon his retirement as Chief of Army. Lt General Morrison will be replaced by incoming Chief of Army, Lieutenant General Angus Campbell DSC AM", Senator Ronaldson said.

ANZAC Centenary Services in Department of Veterans Affairs

Budget 2015-16



The 2015-16 Federal Budget announced \$8.8m over the next four years to enable a small number of key additional domestic services to be added to the ANZAC Centenary Programme.

These services will be conducted at National Memorials around Australia and will include commemorations for battles and events across all significant theatres of war including WW1, WW2, Vietnam and Korea.

Additionally, the centenary of the First World War Armistice has been added to the schedule of services and will be the finale service for the ANZAC Centenary period.

The ten domestic services added to the commemorative programme are:

- · 75th anniversary of the Battle of Greece and Crete
- 75th anniversary of the Siege of Tobruk
- 100th anniversary of the capture of Beersheba
- 75th anniversary of Victory in the Pacific (VP Day)
- 50th anniversary of the Battle of long Tan (Vietnam Veterans' Day)
- 75th anniversary of the Fall of Singapore
- 75th anniversary Battles of Coral/Balmoral a DVA E-news error!
- · 75th anniversary of Australian work on Hellfire Pass
- 65th anniversary of the Korean War Armistice
- · 100th anniversary of the Armistice

For more information about ANZAC Centenary services, news, and anniversaries follow the ANZAC Centenary Facebook

Minister Assisting the Prime Minister for the Centenary of ANZAC Special Minister Of State

Rehabilitation and reducing claim times target of 2015– 16 DVA Budget

The 2015 Budget for veterans continues to deliver on the Government's commitment to recognise the unique nature of service and is part of the Government's plan to build a strong, safe and prosperous future for all Australians.

A greater focus on complex case coordination, rehabilitation, reducing claim processing times and improving long-term health impacts through early intervention are key initiatives of the Budget for the Department of Veterans' Affairs (DVA).

The 2015 Budget delivers more than \$12 billion for veterans' affairs, including \$6.5 billion for pensions and \$5.5 billion for

health care. The Budget delivers \$10 million to boost the number of case coordinators in DVA.

The increasingly complex nature of claims being made to DVA requires a more tailored approach. This funding will expand our existing case coordination services to ensure improved, timely and tailored service delivery for veterans and their families.

Since coming to Government we have worked hard to reduce the processing times for all DVA claims. Swift resolution of claims is a vital part of early intervention. Progress has been made and we recognise that we need to continue to focus on making further reductions to claim times as earlier intervention leads to better long-term health outcomes for our veteran community.

Despite an overall reduction in DVA clients, largely due to the sad but inevitable decline in the numbers of Second World War veterans, we are seeing increased numbers of claims from veterans of recent wars who have multiple conditions, including at least one mental health condition. Additional case coordinators will help improve the processing times for these complex claims.

The Government will also make changes to the Veterans' Vocational Rehabilitation Scheme (VVRS) to assist veterans with injuries in getting back to work. We know that many of our veterans who have been injured, wounded or ill want to get back to work. These changes will ensure their pension safety net better reflects their transition back into work. Getting back to work can be a very important part of the recovery.

Improvements to the VVRS will allow veterans to take the important first steps to returning to the workforce with the support of the compensation system should they need to take another break from employment.

Consistent with the Government's pre-election commitment to give Defence Force Retirement Benefit (DFRB) and Defence Force Retirement and Death Benefit (DFRDB) military superannuants aged 55 and over access to the best indexation arrangement from three indices (Consumer Price Index (CPI), Pensioner and Beneficiary Living Cost Index (PBLCI), and Male Total Average Weekly Earnings (MTAWE)), the Government will continue to index service pensions, war widows pensions, income support supplement, veteran disability pensions (including the Special Rate or Totally and permanently incapacitated (TPI) pension), wholly dependent partner payment and special rate disability pension against these three benchmarks.

The 2015–16 Budget also includes:

- \$3.7 million to extend the in-home telehealth trial for veterans and war widows, an initiative aimed at keeping veterans in their own home and own community for longer
- streamlining the pathway for review of decisions about entitlements made under the *Military Rehabilitation and Compensation Act 2004*
- providing further funding for the Centenary of ANZAC programme to support additional events commemorating battles that occurred on the Western Front during the First World War and key anniversaries from other conflicts
- extending tax deductibility status for the National Boer

War Memorial and the Australian Peacekeeping Memorial projects.

The DVA Budget for mental health will remain uncapped and be driven by demand from clients.

Over the past 12 months, the Government has expanded access to the Veterans and Veterans Families Counselling Service (VVCS). We have also made it easier for veterans dealing with depression, post-traumatic stress disorder and anxiety, plus substance and alcohol use disorders, to access free and immediate treatment for their conditions regardless of whether they are related to service.

This Government is delivering on its commitment to honour the unique nature of military service.

Century of Service Honours WW2, Vietnam

Minister For Veterans' Affairs

Senator The Hon. Michael Ronaldson

The Government's commitment to honour Australia's century of service was outlined in the Senate on 13 May 2015 with the release of the Government's third Ministerial Statement on the Centenary of ANZAC.

Reporting on the activities which marked ANZAC Day 2015 in Australia and around the world, Minister Assisting the Prime Minister for the Centenary of ANZAC, Senator the Hon. Michael Ronaldson, said he was focussed on commemorative events marking other key anniversaries in coming years.

"The 2015-16 Budget contained \$35.5 million for additional commemoration as part of the Centenary of ANZAC," Senator Ronaldson said. "In August, our commemorative focus will return to Gallipoli when we commemorate the anniversary of the August Offensive at Lone Pine before our attention will shift to the Western Front where Australian forces suffered their heaviest losses but also experienced its greatest success for the First World War campaign.

"Beyond the key centenary anniversaries of the First World War, it is appropriate that our nation honours our still living veterans from the Second World War, Korea, Malaya, Borneo and Vietnam." "One of the key events which will be supported by this funding is the 50th anniversary of the Vietnam War, including the Battle of Long Tan, the Battles of Fire Support Base Coral and Balmoral and the Battle of Binh Bah," Senator Ronaldson said.

The Battle of Long Tan, which was fought on 18th of August 1966, saw Australian troops involved in one of the fiercest battles of the war when 108 men from D Company and 6RAR clashed with more than 1,500 Viet Cong troops. Veterans and Veterans Families Counselling Service (VVCS) and Veterans Line can be reached 24 hours a day across Australia for crisis support and free and confidential counselling. Phone 1800 011 046 (international: +61 8 8241 4546)

"What was at first believed to be a significant defeat, was soon to be a realised as a decisive victory for Australia as troops returned to the scene of the battle the following day and discovered that the Viet Cong had suffered heavy losses resulting from the battle," Senator Ronaldson said. "Since then, the Anniversary of the Battle of Long Tan has been the day that we honour and commemorate the Australians who served in Vietnam, especially the 500 who were killed and the 3,129 who were wounded, became ill or were injured as a result of the conflict.

"As a nation, we failed to appropriately acknowledge the men and women who served in the Vietnam War, Australians who served their nation at their nation's request. It is therefore extremely important that we appropriately recognise their service during the 50th Anniversary of the Battle of Long Tan. "As outlined in my Ministerial Statement, the Government will make further announcements about commemorations for the Vietnam War shortly," Senator Ronaldson said.

The additional funding for commemorations, including the 50th anniversary of the Vietnam War, is part of a broad suite of budget initiatives aimed largely at improving rehabilitation outcomes for veterans and reducing the time it takes to process claims. Other initiatives include:

- Overall spending of approximately \$12 billion including \$6.5 billion on income support and compensation and \$5.5 billion on healthcare for veterans;
- \$10 million to increase the number of claim coordinators to help reduce claim processing times;
- Providing \$3.7 million to extend the in-home telehealth trial for veterans and war widows, and initiative aimed at keeping veterans in their own home and own community for longer; and
- Streamlining the pathway for review of decisions about entitlements made under the *Military Rehabilitation and Compensation Act 2004.*

Government Launches Mental Health App for Smart Phones

A new mobile phone app to help serving and ex-serving ADF personnel manage stress and build their psychological resilience is available to download for free from the iOS app store and Android Google Play.

Minister for Veterans' Affairs, Senator the Hon Michael Ronaldson and Assistant Minister for Defence, the Hon Stuart Robert MP, officially launched the *High Res* app on 9 March 2015 as part of the Australian Government's innovative approach to improving mental health outcomes for defence personnel and younger veterans.

"We recognise the unique nature of military service, which is why we are developing these specifically designed resources for the Defence and veteran community," Senator Ronaldson said. "We also recognise the current generation of Defence personnel and younger veterans generally engage with support services differently to older veterans. That is why we are actively developing new products such as *High Res*."

The *High Res* app features two major functions:

'Stress Management' helps users manage their immediate reactions to a stressful situation. The app prompts users

to test their physical, cognitive, emotional and behavioural reactions and helps them adjust their response with the use of tools on the app.

• 'Performance Training' helps to optimise mental performance with regular resilience training and will assist users to better respond to future challenges at work and in life.

The *High Res* app has been developed in collaboration with the Department of Defence and is based on Defence's BattleSMART self-management and resilience training program.

Minister Robert said the app used Cognitive Behavioural Therapy tools and applied them to daily stress management and resilience training. "We know we need to exercise our bodies to get fit, but how often do we exercise our minds? Being resilient means having the ability to deal with difficult situations and knowing the right response to use at the right time," Minister Robert said. "The *High Res* app is like having a resilience toolbox in your back pocket to use whenever you feel the need to. Ultimately, it will help manage stress and over time build mental strength."

High Res is the latest example of DVA and Defence using emerging technology to help the defence community, including families, to raise awareness of mental health issues and improve access to professional support.

Other samples include the *At Ease* website, the *PTSD Coach Australia* and *ON TRACK with the Right Mix* mobile apps.

For more information, people are encouraged to visit the *At Ease* website, www.at-ease.dva.gov.au

Press Release By Senator The Hon. Michael Ronaldson Minister For Veterans' Affairs 27 April 2015

Centenary Commemorations on the Western Front

Preparations are underway for commemorations along the Western Front with the Minister for Veterans' Affairs and the Minister Assisting the Prime Minister for the Centenary of ANZAC, Senator the Hon. Michael Ronaldson, meeting with the Belgian Minister for Defence, Steven Vandeput, to discuss arrangements for events commemorating the centenary of the First World War.

A day after the unveiling of the designs for the Sir John Monash Centre at the Australian National Memorial in Villers-Bretonneux, France, Senator Ronaldson attended a wreath laying ceremony at the Tomb of the Unknown Soldier in Brussels.

He also met with Geert Bourgeois, the Minister-President of Flanders, Koen Verlaeckt, the Secretary General of the Flanders Department of Foreign Affairs, and Pierre Ruyffelaere, the General Coordinator of the Flanders Government, to discuss Australia's plans for commemorating battles that took place along the Western Front.

"It was pleasing to see the incredible turnout for ANZAC Day Dawn Services around the world as Australians mark the landings at Gallipoli that took place 100 years ago," Senator Ronaldson said. "Soon, our focus will shift to the Western Front through Belgium and France where the efforts of Australian soldiers were a pivotal component in determining the outcome of the war."

During the trip, Senator Ronaldson also inspected the VC Corner Cemetery at Fromelles ahead of the 2016 centenary of the fierce battle that caused more than 5,000 Australian casualties and claimed the lives 1,917 Australian troops in a single day.

"As a nation, we suffered many more casualties in battles that took place on the Western Front than those incurred at Gallipoli. However, it was also on the Western Front that Australian troops made the most significant advances in the First World War and contributed greatly to the outcome of the campaign. "I would like to acknowledge and thank the French and Belgian governments for the continued care and respect shown for the graves of more than 45,000 Australian soldiers buried in the two nations.

"The Centenary of ANZAC is our nation's most significant period of commemoration. Honouring those who fought on the Western Front, remembering their legacy and learning from the example they set will be a key part of the centenary programme," Senator Ronaldson said.

For more information about the ANZAC Centenary, visit www. ANZACcentary.gov.au.

Senator The Hon. Michael Ronaldson Minister For Veterans' Affairs Minister Assisting the Prime Minister for the Centenary of ANZAC Special Minister Of State

70 years since victory in Europe was declared

The Minister for Veterans' Affairs, Senator the Hon. Michael Ronaldson, joined seven Australian veterans at the Arc de Triomphe in France at international commemorations on 8 May 2015 to mark 70 years since Victory in Europe was declared during the Second World War.

"8 May 1945 was declared Victory in Europe (VE) Day after Germany signed an unconditional surrender on all fronts, bringing an official end to the Second World War in Europe, and today, 70 years on, we remember all Australians who served in the war against Germany and her European allies." "On the pavements at the Arc de Triomphe, the Australian veterans who all served in the European or Mediterranean theatres during the Second World War, along with their former allies, remembered this historic occasion in what was an emotional experience," Senator Ronaldson said.

Australian men and women served in Europe and the Mediterranean from the beginning of hostilities in September 1939 until the war ended on 8 May 1945. Fighting in the European and Mediterranean theatres came at a great cost, with some 28,000 Australians killed, wounded, or taken prisoner-of-war.

There were also acts of great courage and bravery, with eight Australians being awarded the nation's highest military honour, the Victoria Cross (VC), during fighting against Germany and her European allies. "The sacrifices and acts of heroism from Australians on European soil, at sea, in European skies and in the campaigns around the Mediterranean, were not in vein and will forever remain a part of our history."

"While I am privileged to join these seven Australian veterans here in France, I want to encourage all Australians, whether at home or abroad, to pay their respects this VE Day and remember all those who served our nation," Senator Ronaldson said.

Follow the veterans on Facebook at ANZAC Centenary, Twitter at @dvaaus and Flickr at DVAAus when in France and London. Veteran biographies, images, historical background and other resources are available at www.dva.gov.au/media

New Banner For Post-1975 RAAF Deployments

This year is the 100th anniversary not only of the Gallipoli landings, but also that of the fledgling Australian Flying Corps' first operational flight on 27 May, 1915, over Turkish lines, in Mesopotamia (now Iraq). Flying out of Basra, the Mesopotamian Half-Flight flew in support of ground operations in the unsuccessful advance on Baghdad. One hundred years on, the RAAF is again conducting flying operations into Iraq.

The RAAF has been involved in overseas operations throughout the Middle East for over ten years, and in other countries, for several decades. The Victorian Division of the RAAF Association considered it timely to produce a new banner, behind which current and former serving RAAF members, who had served in post-1975 deployments could march on ANZAC Day.

About 25 personnel, including a number in uniform, braved the Melbourne weather, to march behind the new banner. The group was led by SQNLDR Christopher Hayden, Ground Defence Officer, RAAF reserve, currently serving with No 1 Security Force Squadron, as staff officer at HQ, RAAF Base Williamtown, NSW.



The Post-1975 RAAF Banner paraded for the first time in Melbourne's 2015 ANZAC Day March Photo; RAAF Association (Vic Division)



SQNLDR Chris Hayden and marchers wait to step off behind the new post-1975 RAAF Banner Photo; RAAF Association (Vic Division)

Chris's deployments have included a posting to East Timor (1999-2000), Iraq (2006), in Lebanon as team leader of observers Group ZULU of the United Nations' Observer Group Lebanon (2012-2013), and a stint in the Solomon Islands as a capacity builder with the Solomon Islands police force (2007-2008).

Article by RAAF Association, (Vic Divn)



An F/A-18 and a Mustang at Avalon Air Show Media Launch, Nov 2014. Photo: CPL David Said RAAF

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- · Skydive the Beach
- Touchdown Helicopters
- NSW Air
- Elite Jet
- Sydney Mircolight Centre
- Light Aeronautics Businesses Including: Aero V Australia, Airag, Aircraft Maintenance Centre, Air Safety Solutions, Capital Aircraft Services and Total Aerospace Solutions.
- Shell Aviation
- Southern Biplane Adventures
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Books in Brief



Winning Tactics - War in the Air

Author: R.J. McLean Paperback: 198 pages, with 140 images Publisher: Amazon CS (e-book on Kindle) Availability: www.bookstore.bookpod.com.au Price: \$US 20.20

Winning Tactics ~ War in the Air is a history of the military and naval experience of aviation, with a four chapter focus on aviators of the Great War, their breathtaking aerial repertoires and the rise of modern tactics.

The book presents the layers of history as a vivid tapestry with endless threads woven through time to illuminate the present and the future, so we can see how these ideas developed in earlier periods and acquire an understanding of how they might develop, and emerge into the future. History never repeats, but forewarned is forearmed, since it often follows generally familiar patterns.

In tactics as in everything else, a glimpse of the future can often be grasped through the medium of a reflected past. However, the further back one goes, the more the conditions of material and social outlook differ from those of the present, and it becomes ever more challenging to stand in the shoes of those whose deeds we probe. Past people were not the same as us, but dressed in petticoats and top hats. They had different ideas from our own.

Therefore, they need to be understood on their own terms, not ours. This book delves into their world, from the perspective of those who mastered their aircraft and conquered the skies. Here, those winning tactics that enabled aviators to vanquish their opponents are revealed to the reader. To survive in the past, the best aces were frequently the most calculating of all. Those who balanced risk taking, with a clear understanding of their aircraft and the capabilities of their opponents, and the position at which they found themselves at the beginning of the engagement. From the inception of flight, through observations across three centuries of aerial conflict, striking parallels are shown between the great tacticians, often the ablest thinkers, and most practitioners with a clear sense of vision and mission. They knew that in war; often you don't get to pick your moment, it picks you. So when your moment comes, be ready to take it.

On the shelves, there are books on the subjects of specific aircraft, aircraft types, specific wars, and at times a little something on tactics ~ while no one compiled an all-embracing, whole-history study of how to win in the air from the perspective of the aviator, offered in their own historic words. *Winning Tactics War in the Air* is the first book to present a comprehensive study of the history of aerial tactics in a detailed operational history of aviators at war, from the near forgotten aeronauts of the French Revolution thru to our more recent operations over the hot, ever shifting desert sands of Iraq.





Peter Johnson

My Way With Words

Author: Peter Johnson Soft and hard cover: 159 pages, with B & W and colour photos Publisher: Bookpod Availability: www.bookstore.bookpod.com.au Price: \$39.95 softcover and \$59.95 hard cover

Peter Johnson's 46 year career in journalism and public affairs has taken him from Brisbane and its trams to the Concorde supersonic jetliner and on to the Australian Defence Force.

When he started a journalism cadetship on the Brisbane *Courier-Mail* in 1965 he had no idea that the profession of words would take him around Australia and around the world. Newspaper work in Brisbane, London, and Melbourne provided a stepping stone to a job as civilian Public Relations Officer for the Royal Australian Air Force in Melbourne and ultimately Regional Manager, Defence Public Affairs for Victoria and Tasmania.

During his time with the Department of Defence and RAAF in particular, he was involved as an aviation writer and PRO. His book recalls many aviation activities that he was associated with in Australia, Malaysia and the UK.

He was in Butterworth in 1986 where he witnessed the return of 79SQN Mirage aircraft from Exercise Cope Thunder in the Philippines and covered the 'wind down' of the RAAF presence in Malaysia. He covered the first Roulettes public display in Mt Gambier in 1990 by flying in one of the PC-9s while his PR friend, Dennis Hersey, took the photographs of the flypasts.

There are many aviation stories in the RAAF that many readers will find interesting and may find the answers to many PR questions they have had over the years. A recommended read for serving and ex-RAAF members

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AVM James Hillary Flemming AO AM 1928 - 2015



A large contingent of friends and colleagues gathered with family in Duntroon Chapel in Canberra on Monday 16 February to farewell Air Vice Marshal James Hillary Flemming AO, AM. In his message to all RAAF personnel on the day after Jim's passing, CAF outlined a long career that ranged from Mustangs to Mirages, and included a USAF exchange posting where he flew F100 Super Sabres and the F104 Starfighter. Air Marshal Geoff Brown described him as a stalwart, and there can be no doubt that he was a 'classic fighter pilot', a product of the can-do culture that grew during WWII and Korea, and well known for that trait in the fighter world and indeed across the Air Force.

Jim was born in December 1928 and as a young teenager during World War II, was 'busting' to get into the action. So much so, as CAF reports, he enlisted in the Army while only 16, but was found out and discharged. With his indomitable spirit that would never be deterred by such minor setbacks, an attitude that distinguished him from the average during his long career, Jim borrowed his uncle's birth certificate and successfully enlisted in the Air Force, again underage. However, by the time he had completed his flying training, WWII was over and he was posted to 77SQN flying Mustangs in Japan with the Occupation Forces. It was from here that 77SQN flew their early operations against North Korea in 1950, and Jim flew the first of his 100+ missions against the North on the first day of Australian fighter operations.

When he took up his appointment as Director of the Australian War Memorial years later on retirement from the RAAF, he found the Korean War had been virtually ignored and had a 'sense of humour failure' when told it was a small affair of little account (or words to that effect). He quietly told his informant that a quarter of the pilots in his squadron had been killed or captured in the war and three million Koreans had died. Needless to say, the AWM now has Korean War displays, and commissioned the writing of a two volume official history of the war.

In a career that was almost totally fighter related, Jim enjoyed many wonderful highlights, but on top of his list would have been his forming of the Meteor aerobatic team (the *Meteorites*) and then some years later as CO, his successful deployment of 75SQN with its new Mirage III aircraft to Butterworth in 1967. As the first permanent deployment of a Mirage Squadron, there were many problems to solve, and Jim was well suited to the challenge. Not afraid to by-pass a regulation or two, Jim's focus was to cut through the 'red tape' and get the job done. He would back his subordinates to do the same, and they loved him for it. Jim built his team of pilots and numerous support staff with his oft expressed and firmly held view that "being a fighter pilot is a state of mind, and that you don't have to fly an aircraft to be a fighter pilot. Everyone needs to understand each of us has a role in the Squadron, and that role and individual is to be respected by all".

Another highlight of his career was 1973-75 as Officer Commanding RAAF Base Williamtown, in a time when OCs were blessed with resources under command. His first task was to set about restoring some discipline and military bearing to the base, an aspect that had been in decline. Al Winchester, our local barber, will attest to a full booking sheet during Jim's time. People who were on the base will fondly remember 'his aircraft', A3-40, with the Williamtown crest painted on the tail, and the OC flying it as often as time would allow.

Jim was a valued member of the RAAF Association in two divisions – the ACT Division where he lived after retirement, and the Fighter Squadrons Branch of the NSW Division. Even as his health failed him, he was unfailingly gregarious and positive, and his group at social gatherings was invariably a happy affair, with plenty of laughs and stories of past deeds, good and bad. A man of his times, he might not have fitted so readily into today's RAAF. If so, that would be our loss – he was a great servant of his country, and of his Service, and he will be sorely missed.

AVM Neil Smith (Retd) GPCAPT Doug Hurst (Retd) WGCDR Geoffrey Schmidt (Retd)



New Year, New Career.

Career's outside the Defence Force that offer a great salary!

If you are leaving the Defence Force and wondering how to increase your salary in the New Year here are 4 easy ways to increase your earning potential out in the civilian world.

4 easy ways to increase your earning potential!

 Increase your management prospects - Updating your skills through training courses is a great way to increase your skills and knowledge, stay current and show employers that you take your career seriously. Having a mentor in the field you wish to escalate in is a fantastic way to not only improve your skills and knowledge but also introduces you to important contacts, assists with perspective and vision as well as providing you with an experienced sounding board. Stepping up the ladder is a sure way to help you step up the pay scale.

Salary of a General Manager or Operational Manager - \$50,224 - \$185,121

http://www.payscale.com/research/AU/Job

 Increase your versatility – many companies are combining roles together to save costs eg Human Resources may also absorb Learning and Development and/or Work Health and Safety. Having skills and qualifications in a number of areas that complement each other is a great way to make you a more versatile and employable person.

Work Health Safety Manager - \$59,558 - \$186,992

http://www.payscale.com/research/AU/Job

 Becoming a Trainer and Assessor in your field – To be a trainer of your industry means that you really are having an impact on that industry as you are training the future and determining its quality, it's also quite a nice ego boost to know you are one of the chosen ones to train the up and coming generation of your trade.

Below is a sample of average salary ranges for a variety of job roles compare to that of a Vocational Education and Training Trainer and Assessor. (http://www.payscale.com/research/AU/Job)

Trainer and Assessor - \$51,324 - \$105,315 (Vocational Education and Training - VET) Australian Soldier - \$48,155 - \$103.017

Construction Worker - \$31,540 - \$74,914

Electrician - \$41,050 - \$94,432

Automobile Mechanic - \$32,050 - \$61,679

Plumber - \$38,307 - \$86,208

Accountant - \$39,199 - \$81,385

HR Coordinator - \$43,562 - \$72,383

4. <u>Contracting</u> – there are many reasons why companies are moving toward contract staff; to cover busy periods, cover maternity leave or special projects to name a few. Not only do contract roles generally offer more pay they also often offer flexibility, experience across a number of companies as well as providing a foot in the door in a particular company or an introduction to another desirable company you may want to work for on a future contract.

Some ideas for contract roles include:-

• Quality Auditor – an auditor may be contracted as an internal or external quality auditor.

Quality Assurance Auditor - \$46,994 - \$100,836

http://www.payscale.com/research/AU/Job

 Project Manager – it is common practice for specialist project managers to be contracted for the lifecycle of the project.

Project Manager - \$61,139 - \$179,739

http://www.payscale.com/research/AU/Job

As the New Year gets underway here are a few tips to try and increase your salary, whether it be within the Defence Force or time to take the step to moving onto a new role or career.

"Education is the most powerful weapon which you can use to change the world" Nelson Mandela.

Whether you are learning from a training course, a mentor or life experiences make sure you learn every day and you will be sure to progress in a positive way, including your career and your salary.

Your DHOAS payments after posting or separation

ADF personnel receiving Defence Home Ownership Assistance Scheme (DHOAS) payments are advised to check how a posting or transition out of service could affect their subsidies.

Members who are transitioning out of the ADF can continue to receive payments if they have sufficient service credit but they need to be mindful of changes to their DHOAS eligibility as a separated member.

For personnel being posted, usually they can also continue to receive DHOAS payments if they follow administrative procedures. This includes advising the Department of Veterans' Affairs (DVA) of their change in circumstances before they relocate.

Separation and DHOAS eligibility

Separating from the ADF can impact on members' DHOAS eligibility, including their subsidy amount and the number of subsidy certificates they can access.

If they have completed 20 or more years of service when they separate they will receive their subsidy payments at the Tier 3 level. Otherwise, their subsidy will be paid at the Tier 1 level regardless of their tier while serving. It is important they advise DVA of the change in their circumstances, to ensure they don't receive an overpayment of subsidy which they will be required to pay back.

Members can receive only one subsidy certificate after they separate and they must apply for this certificate within two years of separating. They need to keep this mind if they want to access their DHOAS entitlement and start receiving subsidy payments or make a change to their existing DHOAS arrangements.

The certificates are valid for only 12 months so members need to ensure they use their final certificate before it expires. There are no options to extend it.

Some members may choose to apply for a subsidy certificate before separating, so their one, post-separation certificate can be accessed at a later date if necessary.

If they are making progressive draw-downs on a construction loan, and they are separated, they may wish to defer applying for their one post-separation certificate until construction is complete, keeping in mind it must still be within two years of their separation. This is so they can receive subsidy payments that are calculated on the maximum home loan balance possible.

Posting and 12 month occupancy

A condition of receiving DHOAS payments is that members (or their dependents) must occupy the subsidised home for 12 months from when the subsidy starts. However, if a member moves into a DHOAS-subsidised property with the intention of staying for 12 months and is later issued a posting order, then payments can continue.

To ensure payments aren't stopped, they must advise DVA of their posting before they relocate and request an occupancy waiver. They can use a change of circumstances form found on the DHOAS website, and attach their posting order.

Those members receiving the DHOAS subsidy during the construction of their home must officially occupy the home before posting out in order to continue to receive the payments. They cannot receive an occupancy waiver. If they receive their posting order and are unable to move into their DHOAS-subsidised home before relocating, DVA must cease subsidy payments.

Members can re-apply for a new subsidy certificate and recommence payments once they're able to occupy the home and remain in the property for 12 months.

Once members have occupied their subsidised homes for 12 months, they can continue receiving subsidy payments, regardless of whether or not they reside in the homes, as long as the existing DHOAS loan remains current and is not paid out.

YouTube Video Launched for the ADF Community

A video reminding Australian Defence Force members that support is available no matter what stage of their career they're at has been launched by the Minister for Veterans' Affairs, Senator the Hon. Michael Ronaldson.

Developed in conjunction with the Department of Defence, the video is aimed at serving members with the central message being that while you may not need help now, you might need it down the track.

The video is part of a wider campaign to inform the defence and veteran community about services and support available, flowing from the Review of Military Compensation Arrangements recommendations.

The Review was conducted to establish how well the Military Rehabilitation and Compensation Act (2004) is meeting the needs of the current and former serving Australian Defence Force (ADF) members and their families.

Following a thorough public consultation process with the defence and veteran community, the Review made 108 recommendations, of which 96 were accepted by Government.

The implementation of the recommendations is ongoing but the majority of those that have been actioned have resulted in significant positive outcomes for current serving members, veterans and their families, including expanded eligibility to access support, health care and rehabilitation, increased compensation and a more seamless delivery of these entitlements.

To view the video visit www.youtube.com/user/DVAAus. For more information on the Review of Military Compensation Arrangements visit www.dva.gov.au



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