

The Mossie Bulletin

NUMBER 28

MARCH 2001

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Australian Ideals and Principles

Australia was first officially involved in war service abroad in the Anglo-Maori conflict in New Zealand in 1860-61. Since then Australians have served with distinction abroad in nine separate conflicts and in several peace-keeping missions.

It was with the landing at Gallipoli during the First World War (1914-1918) that there began to emerge the tradition of Anzac with the ideals of courage and sacrifice and the principles of mateship that distinguish and unite all Australians, irrespective of their origins.

Australians in the Second World War in Europe and in the Pacific (1939-1945) and since,

fighting also for the preservation of freedom and the safeguarding of democracy, developed further the ideals and principles to give Australia and Australians independent, clearly defined identities.

Past Prime Minister, Paul Keating, said during the Australia Remembers Celebration in 1995, "By their example they taught us about the ties that bind us and our common cause.

And by the same example they compel us now, not just to remember them, but to pass on the lesson to our children."



Tomb of the Unknown Australian Soldier in the Hall of Memory at the Australian War Memorial.

The Unknown Soldier

Plans for an Australian unknown soldier were first put forward in the 1920s but it was not until 1993 that an unknown Australian was at last brought home.

To mark the 75th anniversary of the end of the First World War, the body of an un-

known Australian soldier was recovered from Adelaide Cemetery near Villers-Bretonneux in France and transported to Australia .

After lying in state in King's Hall in Parliament House, he was interred in the Hall of Memory at the Australian War

Memorial on 11 November 1993.

The unknown Australian soldier was buried in a Tasmanian blackwood coffin with a slouch hat and a sprig of wattle, and soil from the Pozieres battlefield was scattered in his tomb.

How the Pathfinders found their way

This article was submitted by Mac Skinner, it describes some of the World War II technological advances that aided the Mossie Pathfinders to lock on to distant targets.

Oboe, the radar system was to the lay observer, the most amazing development in navigation of all. Oboe was first used by the Pathfinders to mark Essen in March 1943, for the main bombing force. Until this raid, Bomber Command had lost 368 aircraft in attacking Krupps, but the six Pathfinder Mosquitoes which, on Oboe, dropped 24 target indicators to mark Krupps for the main bombing force enabled no less than 83 per cent of the bombs lifted to be registered as on-target strikes. It is of interest to record that the advent of radar made the magnificent work of the Pathfinder Force possible and consequently, the wonderful efficiency of our bombing attack. When the P.F.F. Mosquitoes ground-marked a target the name given to the operation was Parramatta, and when the uncanny system of sky marking was used, the operation was called Wanganui. These types of target marking are "blind", that is, they are done on radar,

but when the Oboe system was used the word "Musical" was added to the title. "Newhaven" was the name of another system of target marking which included both visual and blind marking. It is unfortunate that space forbids our di-

ment of a circle through the target, the radius of the circle being the distance of the target from the tracking station. The aircraft equipment supplies the remaining component of the signal beam. Signals are purely aural, there being no visual rep-



lating upon these intriguing types of operation; nevertheless, the radar part of the job is in itself of more than passing interest. Oboe makes use of two ground stations, one in Norfolk, the other in Kent, the former being known as the "releasing" station and the latter as the "tracking" station. The tracking station transmits a component of a signal beam, which runs as a seg-

resentation whatsoever; the pilot and navigator each receive signals through their ear-phones, the pilot's being high pitched, the navigator's low. Each has his own set of signals and consequently the bombing or marking operation is a conjoint effort.

(Continued on page 3)

| | | | |
|---|---|--------------------|-------------------------|
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How the Pathfinders found their way – contd

Very Narrow Beam

We will take the pilot's signals first. Initially, the aircraft must be flown to a waiting point at one end of the beam, and this can be done either by orthodox navigation or by flying on a W/T beam from this country. Having arrived at the waiting point Oboe is switched on and the signals heard. These are the Morse T (-) and the Morse E (.) which, when overlapping, give a continuous note in the ear-phones. The overlap zone is only 17 yards wide and so it may be appreciated that pretty accurate flying is needed to keep the continuous note from breaking down into dots or dashes, as deviations from the curved path of the beam will bring about.

Subsidiary beams, concentric with the main beam, are spaced at 5-, 10- and 15-mile intervals on both sides. These give signals of X, Y and Z respectively over and above the dots and dashes making up the main beam, the pilot will know

his position with a fair degree of accuracy if he should, by some mishap, be late in getting to the waiting point.

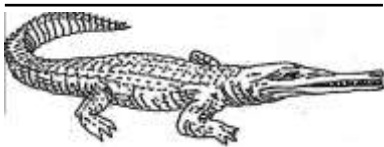
As the aircraft flies along the beam it transmits signals which are received at the releasing station and, consequently, as its range is steadily increasing from the releasing station, it is possible to plot, at the latter, the exact position of the aircraft at any one instant. It is, of course, absolutely essential that, once on the beam, the pilot flies his aircraft at a constant height and fixed air speed. He must on no account vary these factors.

Having, for example, switched on the system at the waiting point, we will now follow the aircraft along the curved path of the beam which leads across the target - the pilot keeping the continuous high-pitched note coming through. The navigator is sitting there listening and, at 10-minutes' flying time from the target, he hears four Morse As which are followed by a continuous low note until, at 8

minutes from the target, he gets four Bs. When 5 minutes away four Cs come through, again followed by the continuous note which breaks at 3-minutes' distance to four Ds. After this the continuous note comes through until only 5 seconds away from the target, when five pips are heard for 2½ seconds followed by a 2½-second dash. The navigator has the bomb-release button in his hand and, as the 2½-second dash ends, he presses it and the bombs have gone. Immediately the set is then switched off and the aircraft heads for home.

This, however, is not the end. At the releasing station a graphic record of the run has been made automatically, and when the crew get back it is *they* who are told how they have performed. It is no good them saying they were bang on when they can be confronted in black and white with evidence that they were, in fact, 50 yards off!

Annual Reunion



There is another annual reunion planned at Truscott Base between 16th-26th May 2001 by the Truscott Base Tribute Committee.

Details have been included on a separate sheet with this bulletin.

A52-600 Restoration Project

The documentation phase is about 60-70% complete. All the diagrams and documentation from Richmond have been sorted, catalogued and cross referenced. The cataloguing and identification of the many hundreds of photographs is about half complete. These photographs provide an invaluable history of how the parts were originally positioned within A52-600 and also they depict how the aircraft was stripped for restoration. They will assist greatly in part identification when the Museum commences the cataloguing of the actual parts, prior to hand on restoration activities. Unfortunately the Walrus is still occupying the Restoration hangar and will be there for a few more months.

Graeme Coates and his little band of stalwart documenters are looking for more assistance, so pick up the phone and call Graeme on (03) 9428 2324 – don't be shy. He is looking for people prepared to put in a day per week or per month. Why don't you call him now?

John Mills Recalls

This paper is the third part by John Mills who was chief engineer of de Havilland Aircraft Proprietary Ltd before, during and for sometime after the Mosquito (D. H. 98) was manufactured in Australia.

This follows on from previous Bulletins with the final part in the June Bulletin.

John Mills' contribution towards a definitive history of Mosquito production in Australia.

On the 7th December 1941 Japan attacked Pearl Harbour and entered the Second World War. The threat to Australia was obvious. On February 15th 1942 Singapore fell losing all the 8th Division AIS as prisoners of war.

Mr John Curtin had become Prime Minister of Australia on the 7th of October 1941 and had arranged that Mr Essington Lewis, leader of B. H. P. should take supreme control of all munitions production including aeroplanes in Australia.

The aircraft advisory committee which Mr Essington Lewis headed with Mr (later Sir Daniel) McVey as secretary held its very first meeting on 13th January 1942. It met weekly with a firm discipline which Major Murray Jones, D. H. Australia General Manager, respected and adopted within his own organisation.

In December 1941 I was Technical Manager for the propeller division of D. H. Australia. Ian Spittle was Manager and was about to visit the US and UK for machine tool procurement. Major Murray Jones called me to his office showed need the photograph of a beautiful aeroplane and said,

"This is a wooden aeroplane, an unarmed bomber, or fighter, it is the fastest aeroplane in the world, it is top secret, designed and

made by our parent company, it is called the Mosquito, do you think we can make it here? If so, you and John Byrne should go to Canada immediately, D. H. Canada are building the Mosquito also and you should join Ian Spittle who is travelling to the USA".

We received from the Prime Minister of Australia, Mr John Curtin, letters of introduction dated January 2nd 1942. These letters of introduction had large red seals and requested all to help us in our unnamed task. These letters turned out to be quite miraculous wherever we travelled. It was reported that Mr Curtin had said, after taking over his heavy wartime responsibility, "how big should we make the red seals on our letters of introduction?"

The three of us set out for America by the quickest possible means which in this case was the Swedish cargo ship "Kanangoora" which took some three weeks to get us to San Francisco with due security activity as the Japanese were around.

We made immediate contact with D. H. Canada who could not have but then have more helpful and we visited the Australian Ambassador in Washington who was Sir Richard (later Lord) Casey. We knew that if the building of the Mos-

quito was to proceed in Australia, supply of engines was essential. The Rolls-Royce Merlin was being made by the Packard Company in the U. S. A. and it would be from here that our engines would have to come.

Sir Richard Casey was, as always, tremendously helpful. Prewar as Mr Casey he had been Treasurer of the Australian government and had been a private owner and pilot of a Percival Gull aeroplane. His aeroplane broke its tail wheel casting taxiing past our D. H. service hangar at Mascot and the pilot asked for a quick repair. We did this overnight and I recall ringing Mr Casey in Canberra to tell him, were some pride, of our achievement and telling him the cost. I recall him saying "Mr Mills, just because I happen to be the Treasurer of the Commonwealth of Australia it does not mean that I have access to the country's funds". But that was prewar history.

Sir Richard was practical and helpful to us and it was no doubt due to his help that John Byrne was able to cable D. H. Hatfield on February the 26th "engines supply now satisfactorily arranged and project practically certain". Incidentally, history shows that it is March 31st 1942 went Sir Richard left Washington to become "Minister of State in the Middle East" with a seat on the British war Cabinet, (unknown to us) and this was being organised

John Mills Recalls – contd

while we were there with him. Also historically it could be noted that in Australia at the first meeting of the aircraft advisory committee, held on January the 13th 1942, "it was noted that the company had dispatched two of its officers at its own expense to investigate the production" of the Mosquito. At the seventh meeting on February 23rd, it was recorded that a memorandum to the Department of Air stressed the view that no time should be lost in making arrangements for the construction of these aircraft. That was providing that the air board was satisfied that this is the type of fighter aircraft required for use in this country. This urgency was influenced no doubt by the bombing of Darwin four days previously.

D. H. Canada was "flat out" getting the Mosquito into production. Harry Povey and Doug Hunter from the D. H. Hatfield were there handling production and design matters and the Bill Tamlin from the Hatfield design office team was there on a quick visit to give first-hand design update on a rush trans-Atlantic visit.

Although D. H. Canada would do anything they could to help Australian production, it became apparent that if the Mosquito was to be built in Australia, our help would have to come from D. H. Hatfield. Accordingly I was to proceed to England leaving John Byrne to handle supplies matters in Canada and the U. S. A.

My trip to England was by a bomber delivery flight. It was to be a "flying fortress" from Montreal Prestwick, Scotland, via Gander in Newfoundland. Later after some week or two of delay ("weather was a real problem")

I found myself in the nose bomb-aimers compartment just in front of the navigator who had just completed his empire air training school course and was on his initial flight across the Atlantic.

We struck Scotland close to the north tip as morning broke and then turning south we had an amazing flight down the coast of Scotland. For some one and half-hours at an altitude of some 1000 feet, which from the bomb-aimers nose seat on a cloud less sunny morning must have been without parallel. We joined the balloon barrages near Prestwick. After landing spent the very long time needed to travel to London and then to Hatfield under the difficult wartime conditions which were a part of the U. K. Everyone took it as a matter of course with air raid warnings, flying bombs and a blacked out existence.

Hatfield, the D. H. headquarters, were quite amazing, producing the Mosquito under the most difficult of conditions and with the aeroplanes versatility and performance now known (the Mosquito was found to be 23 mile per hour faster than the Spitfire). A large number of variants had been made and were being requested. Hatfield had also been bombed.

With all this pressure on the D. H. Hatfield the people whom I had got to know when I worked there prewar could not have been more cooperative and friendly. You could have been excused for thinking that all they had to do was to help us make the Mosquito in Australia. This spontaneous feeling of help and assistants, besides being part of D. H. is remarkable war effort, probably reflect-

ed the great respect and affection held for Australia's D. H. General Manager Major Murray Jones.

Suppliers of Appendix A and other essential parts had to be released from the ministry of aircraft production and Martin Sharp was "one of us". In peacetime Martin Sharp was public relations manager but in wartime was everyone's helper. Subsequently Martin was co-author of the award-winning book, with Michael Bowyer, "Mosquito", published in 1967 which must be regarded as the Mosquito "official history".

We needed drawings of the fighter bomber version for Australia. The drawing office of immediately set about making a full set of microfilm photographs of the many tens of thousands of drawings which constituted the Mark VI version so that I could take them back with me when I returned. They also included masses of technical data and schedules that are so essential.

Mr Lee Murray was the Australian-born General Manager of D. H. Hatfield, agreed to release Merv Waghorn to come to Australia as Technical Superintendent and arrangements were made for a continuing supply of drawings and updates to be supplied on reproducible linen, so necessary for production drawing needs.

Mr C.C. Walker, chief engineer of the D. H. parent company gave his design delegation to Merv and, because Australian plywood would need to be used and there would be many design the decisions needed.

Arrangements were also made

(Continued on page 10)

Another No 87 PR Squadron Song

From Williamtown a Mossie crew
Was sent off up to PRU
There's nothing there for them to do
It's foolish but it's done

The Yanks are off to Tokyo
The AIF's in Borneo
But PRU don't get a show
It's foolish but it's done

So if SASO says well done my son
A commendation you have won
Tell him to shove it up his bum
It's foolish but it's done

And if it should come to pass
That we were sent away
There'd be no need for Area
So that is why we stay

It's foolish but it's done

This song was forwarded by the Association's Patron, Sam Jordan, who supplied it in memory of Neil (Bosco) Johnson - A52-609, who was also its author.

The Beer Prayer

From the October, 2000 edition of
"NINER NEWS"
(9RAR Association (QLD) Newsletter)

**Our lager,
Which art in barrels,
Hallowed be thy drink.**

**Thy will be drunk,
(I will be drunk),
At home as it is in the pub.**

**Give us this day our foamy head,
And forgive us our spillages,
As we forgive those who spill against us.**

**And lead us not to incarceration,
But deliver us from hangovers.**

**For thine is the beer,
The bitter and
The lager,**

For ever and ever,

BARMEN.

New Members

The Association welcomes the following people who have decided to join our ranks:

PR (Phyllis) Johnston

135 Annetts Parade
Mossy Point NSW

Her husband (Bill) was a Flight Mechanic in 456 Sqdn UK and worked on "S" for Sugar - he died February 2000 aged 80 years.

K (Keith) Meggs

30/17 Taylor
Street
Parkdale, Vic



The author of an encyclopedic, four-volume work on every aircraft type proposed, designed or manufactured in Australia from 1884 to the mid-1980s, called **Australian-Built Aircraft, and the Industry**. He is President of the Aviation Historical Society of Australia.

Sergeant K. R. Meggs, DFM., AAM.
ca.1951 Korea; 77 Squadron RAAF

BC (Bruce) Ruxton AM OBE

4 Collins Street
Melbourne, Vic

Bruce has been President of the Victorian branch of the Returned Serviceman's League (RSL) since 1979. He is renowned for his outspoken and often controversial views on everything from the immigration policy to the latest in current affairs. Bruce motivates people to think about where they are in society.



Information Please

This request for information was received by e-mail, can anyone help?

Lindsey Clayton writes:

I am writing in an effort to locate information on a RAAF Mosquito Bomber that crashed in the Barrington Tops of NSW.

The information I have is the aircraft was on a training flight from Williamtown RAAF Base when at 12.10pm April 16, 1945 it crashed into a mountain now known as 'Aeroplane Hill', killing both pilot and navigator.

The wreckage was not discovered until January 1946.

I seek the information to include in the log I am compiling from a recent bushwalk into the area. We try to record historical data as accurately as possible, this will help to supplement the information gathered on the hike.

Thanks,
Lindsey Clayton.
Newcastle City Council Footsloggers

E-mail:
LCLAYTON@ncc.nsw.gov.au

No mailing address supplied, but I will forward mail as required. Ed.

You know you're getting old when:

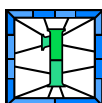
* you sink your teeth into a good steak and they stay there.

* your mind makes commitments your body can't meet.

* you get winded playing bridge.

* you sit in a rocking chair and can't make it go.

Ranks and what they can do...



Air Marshal...

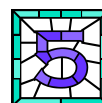
Can leap tall buildings with a single bound.

More powerful than a steam train.

Faster than a speeding bullet.

Walks on water.

Gives policy to God.



Flight Lieutenant...

Demolishes chimney when leaping small huts.

Is run over by steam trains.

Can handle a gun.

Dog paddles adequately.

Talks to animals.



Group Captain...

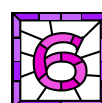
Leaps short buildings with a single bound.

More powerful than tank engines

Can occasionally keep up with a speeding bullet.

Walks on water on small lakes.

Talks with God.



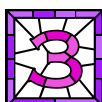
Flying Officer...

Runs into buildings. Recognises steam trains two times out of three.

Is not issued with guns.

Can stay afloat with a Mae West

Talks to walls.



Wing Commander...

Leaps short buildings with a running start.

Is almost as powerful as a tank engine.

Is able to avoid a speeding bullet

Walks on water in indoor swimming pools.

Talks to God if special request granted.



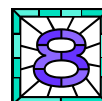
Pilot Officer...

Fails over doorsteps. Says I see no trains.

Wets himself with a water pistol.

Stays on dry land.

Mumbles to himself.



Warrant Officer ...

Lifts tall buildings and walks under them.



Squadron Leader...

Can just clear a small hut.

Loses tug of war with a tank engine.

Can fire a speeding bullet.

Swims well.

Is occasionally addressed by God.

Kicks steam trains off the tracks.

Catches bullets in his teeth.

Freezes water with a single glance.

Because he is God.

With acknowledgment:

"There I was at 20,000 feet The Best of RAF Humour"
by Jack Spence

The Badge of Distinction – The Rising Sun

The design of the famous Rising Sun Badge worn by Australian soldiers was inspired by a brace of bayonets mounted on a plaque on the office wall of General Sir Edward Hutton. Simple enough but as with most Australian icons, the scenario is far more involved than it first seems.

The bayonet shield was the brainchild of Major Joseph Maria Gordon. Born in Spain, he served in the British Army until ill health terminated his career. However his condition improved and he gained a permanent position as Commander of Fort Glenville, a small defence installation assigned to guard the sea approaches to Adelaide.

It was there that he originated the trophy as "a meaningful symbol of defence". He often referred to it as the 'rising sun' and took it with him on lecture tours. The trophy was actually constructed by Commander William Creswell, Commandant of the Naval Forces of South Australia, which at that time comprised one vessel, a small cruiser called Protector.

In 1899 Gordon, by now a Colonel, went to the South African war and while there he renewed acquaintance with a Major General Hutton, a former ADC to Queen Victoria. The two had met about five years earlier, while Hutton was re-

organising the military forces of NSW. Gordon gave the trophy to Hutton as a personal gift.

At the turn of the century, Hutton was appointed Commander in Chief of Australian forces and was confronted with the problem of designing a badge for Australian forces in South Africa - part of the problem was that the British troops wore



slouch hats, also, and something was needed to make it distinctively Australian.

When studying sketches submitted by a Melbourne die sinker, during the badge development, he refused to consider designs featuring Australian flora or fauna - wanting something with a look of martial purpose. "Why not something like that?"

he asked, pointing to the bayonet trophy of arms which, was fastened to the wall over his office door - Room 52A, Victoria Barracks, Melbourne. Thus it was that the digger got his now familiar Sun Badge and has gone through many evolutionary changes over the decades, albeit extremely subtle. The irony is that it is associated with the rising sun and not bayonets.

For many years the original trophy which inspired the Rising Sun badge was relegated to a remote corner of a drill hall at HMAS

Cerberus, the naval training depot at Flinders, Victoria.

It was put into store, but in 1967 it was refurbished and given pride of place on public view at the main entrance to Russell Hill Defence Headquarters in Canberra.

Great Predictions

The Americans may have need of the telephone, but we do not. We have plenty of messenger boys.

- Sir William Preece, 1876.

Landing and moving around the moon offers so many serious problems for human beings that it may take science another 2000 years to lick them.

- Science Digest, 1948.

MAAA Merchandise

The MAAA in conjunction with *LANDINGEAR Pty Ltd* has produced a line of clothing that pictures A52-600 and identifies our Association.

Items currently available:

Embroidered Caps \$20.00

Navy/Red suede peak cap
A52-600 motif embroidered on front
MAAA across back
Adjustable – one size fits all

Polo Shirts \$35.00

Poly cotton with pockets
A52-600 motif with MAAA embroidered on front
Sizes – adult small to 4XL

T-shirts \$20.00

Silver grey
A52-600 motif print on front
MAAA print on sleeve
Sizes – adult small to 3XL

The items listed can be ordered (please state your name and address, a phone contact, the items, the sizes and quantity required)

by writing to :

MAAA Merchandise
C/- Alan Middleton
14 Fitzgibbon Crescent
CAULFIELD Vic 3161.

or

phone Alan on 61 (0) 3 9523 9774

or

fax Alan on 61 (0) 3 9532 8115

Payments (**no cash please**) via cheque or money order should be made to:

“The Mosquito Aircraft Association of Australia”

Price includes postage, packaging and GST.

Note: Please allow up to 3 to 4 weeks for delivery (after receipt of payment by Alan).

Help Wanted

To keep this Bulletin filled with interesting information, the Editor is seeking short stories, photos, anecdotes or whatever. The reserve of publishable information is getting rather low.

How about some of you WW II aviators recording a short story about an adventure you had and sharing it with the other readers of this Bulletin. It will probably jog other peoples memories and therefore prompt others, hopefully creating a snow ball effect.

The Editor is happy to receive it what ever way you like, even a tape recording if you are not up to writing it down.

Photos with accompanying words would also be great. he photos will be scanned into the computer and sent back to you.

Important Dates

Every day between now and later:

Volunteers required to help at Point Cook.

Committee Meetings:

31st March 2001
26th May 2001

Annual General Meeting:

28th July 2001

at: Caulfield RSL
St Georges Road
Elsternwick

John Mills Recalls – contd

to send to Australia a sample finished Mosquito. RAAF Squadron leader Bruce Rose, came to Hatfield and completed a quick conversion course just before returning to Australia. Bruce Rose, incidentally, was a remarkable pilot of great skill who had one "tin leg". The sample Mosquito DD644 flew in Australia on December 17th 1942 after arriving in a disassembled condition Bruce Rose being the pilot. This was a special day for me because after the first flight which was most impressive Bruce took off again with myself as passenger thus enabling me to experience personally the spectacular power dive of reaching 450 mile per hour indicated air speed near the ground. This was followed by the pull-up and near vertical climb for some thousands of feet, for which the Mosquito was becoming famous. It must be remembered that 450 mile per hour indicated air speed was quite remarkable in prejet days.

In due course when all micro-film drawings and technical data were complete I was able to depart for Australia with a heavy briefcase plus protective

conscious material about the top secret Mosquito. Naturally I had to take special precautions on the return trip especially with overnight stops. Mr Curtin's letter worked wonders whenever the contents of the briefcase come under question.

The return to Australia was by Pan American clipper from Southampton to Baltimore USA, and by Liberator courier plane from San Francisco to Australia. The clipper was cut to bear essentials and the leather briefcase with its precious drawings constituted the maximum weight of luggage I was allowed.

The Liberator service across the Pacific had been set up to deliver mail, communications and urgent freight to various Pacific islands that had been occupied by US forces. The Liberator had a civil crew. The navigator, with radio silence and no navigation aids did a magnificent job of making each of the various Pacific islands come up in the middle of the horizon at each of our calls. I was the only passenger and we had a machine gun mounted above the fuselage for some type of defence and the engineer, a civilian, used to try it out on occasions just to satisfy himself.



They told me to fish in the slipstream,
but I can't find it, Sir!

strap containing all this pre-

We called at Honolulu, Johnson Island, Christmas Island, Phoenix Island, and Fiji before landing at Williamstown, then a long trip to Sydney followed.

It was early January when we left Sydney, early February in the USA and Canada, Hatfield and the UK in April and returned

to Australia mid May to early June 1942. There had been the opportunity to hear much wisdom, see much activity on manufacturing fronts, learn as much as I was able and generally to be inspired by all, one could see and hear.

On return to Australia I found the excitement intense for the Mosquito project. D. H. had been allocated the two top floors of the Bradford Cotton Mills building corner of Missenden Road and Parramatta Road to start the project and priority seemed to have been given for the taking over of factory space and the supply of machine tools which were in short supply. We allocated the top fifth floor of Bradford as administration centre with the fourth floor for metal tooling and machine shop.

Major Murray Jones had John Byrne as director of supplies and David McLauchlan as director of finance. I was appointed to be manager D. H. 98 division with the open brief to get production going as quickly as possible and then hand over to production professionals whom we would gather around us. Adding to those from G. M. H. who had already come to us and had done such a great job on Tiger Moth production. Ian Spittle was Manager Propeller Division, covering the growing demands of the Australian aircraft industry, to which Mosquito propellers would now be added.

I was immediately required, on return, to visit Mr Essington Lewis, in supreme command of aircraft production in Australia, to brief him on the remarkable and brilliant aircraft we had to manufacture.

The aircraft advisory committee, under Mr Essington Lewis voices leadership had met

John Mills Recalls – contd

weekly since January 13th 1942. Major Murray Jones instituted quite quickly a series of D. H. 98 meetings so that we were under a similar discipline to that of the aircraft advisory committee.

Our first task was to quickly print and catalogue the tens of thousands of microfiche drawings from Hatfield and make a "the bill of material" or "what does it take to build a Mosquito!" And the specially chosen group did this quickly, surveying each drawing and recording the specification and quantity of material requirements.

Computers were not then it existence but punch cards were around and with the guidance of Ian Spencer (who had come from Advanx) we were able to have printed out quite quickly the massive result which enabled John Byrne to get his supply system working. Spruce and Balsa wood had to be imported (as did the aluminium for aircraft propellers but plywood made from coach wood, was made in Australia.

We assessed all the constituent parts of the Mosquito and made decisions concerning their production. Some we made in our own shops but the vast majority had to be subcontracted.

Mervyn Waghorn arrived from England around August and quickly got all drawings and technical material under strict control. He made arrangements for handling the arrival of the flow of drawings from Hatfield, which were to come in the form of reproducible linen prints from which drawing supplies could be given to our production people. Mervyn quickly tested Australian plywood to ensure it satisfied the design requirements

and we recruited and transferred technical staff to give, under Mervyn's control and development, a strong and respected technical centre.

We set up an organisation to plan production, to make tooling, to subcontract, to manufacture, and to assess our success and lack of success in the various aspects of the project. Beales piano factory became available and we assessed it as suitable for fuselage production, tailplane and flaps. Fifty years later this brings to mind the quotation, by Bishop-designer of the Mosquito-when he told of would Goering's words-"I turn yellow and green with envy when I see the Mosquito. The British knock together a beautiful wooden aeroplane which every piano factory over there is making." (see "Aerospace", RAEs November 1990).

On the floor of the Bradford building we made our "loft" of full size drawings of the wing, fuselage and other surfaces, with the many sections enabling accurate templates and streamlining. We made a "mock-up", full size, of the fuselage so that we can get a proper "look" at things before being able to see a full size product.

We had skills for wood tooling and a strong backup of skilled wood working tradesmen. Jack McConnell, foreman of our D. H. prewar service department, was a master wood worker and he had a fine body of skilled wood workers on which to draw. He had a great knowledge of the ward working capabilities of the factories around Sydney and this was invaluable in choosing subcontractors for our work.

We set up the fourth floor of the Bradford building has our tool room and machine shop. Harry Shaw, from our propeller divi-

sion, was devising the ways and means of getting our tooling made at this stage of the war. We were allocated the few toolmakers that were available from Manpower and we set up a training program for men with little metal work experience. They could be trained to take a tool to a certain distance from completion, leaving the skilled toolmakers to complete the job to the required tolerances.

Gradually the fourth floor of Bradford got machine tools for our old machine shop and we were also allocated a Jig borer, a significant and heavy piece of equipment. It was installed on the fourth floor, but its movement causing the building to vibrate to an extent that ink spilled from my ink well on a desk on the fifth floor! The structural engineer assured us the building was all right!

I do not have records of areas, but from scaling photographs it seems each of the Bradford floors were around 30,000 square feet with concrete pillars spaced at 25 foot centres. Our working population would have been around 200 for each floor. Access was by one small lift taking around 8, and a broad concrete stir well, which nearly everyone had to use and with four or five floors this doubtless helped to keep folk in condition. There was also an industrial lift, suitable for a truck, which slowly could move bulky items in. One newcomer to the fifth floor noted with interest the appearance of the old cart and horse that came to remove the garbage!

**They went with songs to the battle, for they were young,
Straight of limb, true of eye, steady and aglow,
They were staunch to the end against odds uncounted,
They fell with faces to the foe.**

**They shall grow not old, as we that are left grow old,
Age shall not weary them, nor shall the years condemn,
At the going down of the sun and in the morning,
We shall remember them.**

LEST WE FORGET.

Spot the Airfield

Does this bring back memories to the veteran aviators?
How many of you recognise the airfield?

