AUGUST 2014
14 Pilot Aptitude Testing RAF Cranwell
30 Garden Party Shoreham

SEPTEMBER 2014
2 Environment Committee Meeting Cobham House
9 Education and Training Committee Meeting Cobham House
11 New Member's Briefing Cobham House
18 5th General Purposes and Finance Committee Meeting Cobham House
18 3rd Court Meeting Cobham House
24 Air Pilots Luncheon Club RAF Club
24 Sir Frederick Tynms Lecture Royal Aeronautical Society
29 Election of Lord Mayor Guildhall

OCTOBER 2014
7 Technical and Air Safety Committee Meeting Cobham House
16 6th General Purposes and Finance Committee Meeting Cobham House
23 Trophies and Awards Banquet Guildhall
28 Benevolent Fund Board of Trustees Meeting Cobham House

NOVEMBER 2014
7 Silent Change Guildhall
8 Lord Mayor's Show Guildhall
10 Lord Mayor's Banquet Cobham House
11 Education and Training Committee Meeting Cobham House
13 7th General Purpose and Finance Committee Meeting Cobham House
13 4th Court Meeting Cutlers' Hall
13 Scholarships Presentation Cobham House
25 Environment Committee Meeting Cobham House
27 New Members Briefing Cobham House

DECEMBER 2014
9 Technical and Air Safety Committee Meeting Cobham House
12 Company Carol Service St Michael's Cornhill
12 Christmas Supper The Counting House
19 Company closes until 5 Jan

VISITS PROGRAMME
Please see the Flyers accompanying this issue of Air Pilot and previous editions of Guild News or contact Liveryman David Curgenwen at visits@airpilots.org. These flyers can also be downloaded from the Company's website.

6 August The Commandant's Parade and Tour of RMA Sandhurst
4 September Stow Maries
19 September Ridgeview Wine Tour, Ladies Visit
4 October Theatre Evening, The Theatre Royal, Brighton

'Lest we forget', displayed prominently on the underside of this Tucano T1, reminds us of the 100th anniversary of the outbreak of World War 1. This is the display aircraft for 2014 so its message should reach a wide audience. The Tucano is from 72(R) Squadron, 1 FTS, RAF Linton on Ouse. See page 23 for a report on a recent Company visit to Linton on Ouse.
A message from your Editor...

One hundred years ago the lights went out all over Europe as the Great War, or First World War, began. The science of aviation was in its infancy in August 1914, nevertheless aircraft were involved in the conflict from the start, as described vividly by Liveryman Stephen Slater in this issue. To mark this anniversary I have chosen a cover photo of a Tucano marked most appropriately with a large poppy and the phrase 'Lest we forget'. A visit to the Tucano's home base at RAF Linton on Ouse by the Company is described in this issue, a nostalgic event for your editor who was delighted to find it in such good shape. This summer has been a time of great activity for Company visits; in this issue you will also find reports on Paris, RAF Benson, RAF Brize Norton and the Pilatus factory in Switzerland. Additionally visits were made to Biggin Hill, HMS Illustrious and Southampton University. I am extremely grateful to those who submit these reports and the accompanying photos, as making notes must detract somewhat from the pleasure of seeing somewhere new and interesting.

Also in this issue is a report on our recent Livery Dinner, held in the Mansion House and graced by the presence of our Patron, His Royal Highness the Duke of Edinburgh. Assistant Professor Diana Green whets the appetite of our GA fliers with her description of a flying holiday in the USA. Of a more thought provoking nature is an article on automation in the cockpit, a subject that is very much to the forefront of debate within the Company. The North America Region has contributed an article about floatplane flying in Canada which should tempt those of you who have not flown floats to give it a go; it is a wonderful experience which I can heartily recommend. Whilst on the subject of Regions, by the time you receive the October edition of Air Pilot we will know whether we will need to form another Region if Scotland votes for independence. We live in interesting times!

Assistant Tom Eeles
Honorary Editor
DUNLOP SUPPORT KEEPS LANCASTER FLYING

Spectators across Britain are set for a unique sight this August when the last two airworthy Avro Lancaster bombers come together to take part in a series of events. But none of the displays would have been possible without the support of the aerospace companies that continue to provide parts that keep the iconic aircraft in the air.

One such company is Birmingham-based Dunlop Aircraft Tyres which, for more than 100 years, has been based at the historic Fort Dunlop site in the city. During the Second World War most aircraft of the Royal Air Force were fitted with Dunlop tyres and a close relationship was formed that endures today, with the company's products found across fleets flown by the UK forces. Indeed, in recent years the company has been selected to supply tyres for the short takeoff, vertical landing (STOVL) version of the new Joint Strike Fighter, of which the UK has taken delivery of two aircraft, and Dunlop's tyres are also fitted to the new A400M military transport aircraft which entered service with the French forces last year.

But, while the company focuses on its future and the latest tyre developments, Dunlop also places great emphasis on aviation heritage. The company supports a number of initiatives. These include the company’s backing of the Vulcan to the Sky project and, currently, the help it is providing to Ratcliffe College in Leicestershire, where students are building a full-size Spitfire replica. But Dunlop Aircraft Tyres is particularly proud of the role it plays in keeping the last two airworthy Lancaster bombers in the sky.

Each aircraft is fitted with two main wheels and a smaller tyre for the tailwheel and, while these tyres are unique to the Lancaster, Dunlop ensures that it finds the time in its production schedule to manufacture the small number of tyres that the two aircraft require. The Lancaster’s main wheel tyres are very different from those the company makes for modern aircraft. They are larger than even those fitted to Boeing 747s and they incorporate a block tread pattern designed to allow operation of the aircraft from grass runways.

“Today, Dunlop Aircraft Tyres is the world’s only specialist aircraft tyre manufacturer and retreader,” said the company’s chairman, Ian Edmondson, who is also a Freeman of the Honourable Company of Air Pilots. “We operate globally and more than 80 per cent of our products are for the export market, most of them to support the latest generation of airliners and military aircraft. The Lancaster bomber has a unique place in our country’s aviation heritage and we are very proud to provide the tyres that enable the aircraft to keep operating with the Battle of Britain Memorial Flight (BBMF) and the Canadian Warplane Heritage Museum.”

The Canadian Warplane Heritage Museum’s Lancaster is scheduled to arrive at RAF Coningsby on August 8th, where it will join with the BBMF team. It will then take part in a series of flypasts and displays between August 14th and 31st.

MASTER MARINERS’ LADIES LUNCH

Sue Jones reports that "After a brisk walk over Waterloo Bridge it was with some relief that I boarded HQS Wellington to help represent the Honourable Company of Air Pilots at the annual Masters’ Ladies Luncheon. Our host was Mrs Kathy Hughes, the Master Mariner’s Lady, who greeted each guest and quickly offered us hot coffee and biscuits, which were very welcome! Some ladies (like myself) and gentlemen were there as partners or wives of the Masters Elect, so it was a good opportunity to become acquainted with our counterparts in other Guilds and Companies who we might continue to see over the next couple of years.

HQS Wellington is situated at Temple Stairs. She originally entered service in January 1935 as a Patrol Sloop and before the Second World War was based in New Zealand, often taking the Governor General on his visits to islands such as Fiji and Tonga. However, when the war started she took on a very different role and provided escort to 103 convoys in the eastern Atlantic, as well as rescuing hundreds of survivors from sunken ships. At the end of the war she was transferred to the Reserve Fleet and laid up at Milford Haven for disposal but, in 1947, she was sold to the Honourable Company of Master Mariners and converted to the Livery Hall of the Master Mariners. She arrived at Temple Stairs berth on the Victoria Embankment in December 1948. She was honoured with World Ship Trust status in 2004 and was transferred by the Honourable Company to the Wellington Trust, a registered charity, in July 2005. This would ensure her long-term future.

The guests were split into groups and were shown around the ship by Master Mariners. We had a most fascinating hour with our Master Mariner, Commodore Angus Menzies, who not only gave a fascinating history of the ship but also injected humour to the proceedings. We saw at first hand the wonderful artefacts, paintings, furniture and ship models. Needless to say the ship is never left unoccupied! After climbing up and down stairs and steps we retired to the deck for a champagne reception, followed by a delicious lunch of fish – of course – in the dining room which also serves as the Mariners’ Court Room.

We were very privileged to see such a wonderful ship which had so much history both before, during and since the War. For the past 5 years the Wellington has become an important learning facility for children to learn about maritime heritage and sea service. Long may it continue."
Liveryman Richard Piper writes "This year is the 100th anniversary of the outbreak of the Great War and will see a number of events to commemorate and record this milestone across the country. An area that will particularly focus on this anniversary is the Airshow circuit and one group that is heavily involved is the Great War Display Team whose purpose is to 'Commemorate, Educate and Entertain the public about the role of the Sky Knights.' The Honourable Company is well represented with Liverymen Vic Lockwood and Richard Piper as members of the Team flying their SE5A and Junkers CL1 replicas and Liveryman Stephen Slater as co-owner of the BE2 and commentator. The Team has wide-ranging experience with RAF, test, airline and private pilots among their number. All Team members have a passion for flying old aircraft and the history they represent. The aircraft themselves are quite challenging to fly, not only in the low level dog fighting routines but also operating from aerodromes with fixed landing directions rather than the open airfields of the Great War era. Around half the Team's aircraft have no brakes and only tailskids, so cannot land where there is no suitable grass, such as Farnborough, and need to land into wind.

The Team started out in 1988 and was originally called The Wombats. It was an ad hoc collection of aircraft including 5 SE5As, 2 Fokker Dr1s and a Fokker D7, many of them flown by their builders; they appeared that year at the Biggin Hill Airshow. Last year was the 25th anniversary of the Team's formation and 2 of the original members, Des Biggs and Doug Gregory, were still flying with the Team until the previous year; Doug flew his SE5A in January 2013 to celebrate his 90th birthday.

This year's line-up comprises 9 aircraft and 5 types, namely Fokker Dr1 Triplane, Junkers CL1, Sopwith Triplane, BE2c and SE5A. The Team's busy season includes RAF Cosford, Farnborough International, Dunsfold Wings and Wheels, RAFA Shoreham, Bristol Balloon Festival, Highclere 4 Heroes. There are even plans to fly a display at Knebworth as part of the Iron Maiden appearance!

Editor's note: See page 13 for an article by Liveryman Stephen Slater on the proposed commemorative flight by BE2 to Amiens in August.

Not only was Sir Sefton Brancker a founder member of the Company, but he was also as much responsible for the formation of the Royal Air Force as Trenchard, Smuts and Churchill. He died in the ill-fated airship R.101 when it crashed in France on its maiden flight to India. Past Master Robert Pooley recently presented a large portrait of Sir Sefton to the RAF College, Cranwell, as a consequence of discussion with the present Commandant, Air Commodore Chris Luck, at the Royal Charter Dinner. The portrait was originally in the Royal Aero Club; when that closed it was sent to RAF Henlow, then to the RAF Museum where Past Master Pooley purchased it. It is now resplendent together with the portraits of other founders of the Royal Air Force, close to the rotunda at the Royal Air Force College. The photograph shows Past Master Pooley and Air Commodore Luck with the portrait.
HONOUR BESTOWED ON UPPER FREEMAN

During her recent visit to France Her Majesty the Queen invested Upper Freeman Air Commodore J Maas, Defence Attache, Companion of the British Empire. The Company offers its congratulations.

ANNUAL HISTORIC AIRCRAFT ASSOCIATION SYMPOSIUM

The Annual HAA Symposium will be held this year on Saturday 8th November. The venue is as before, the RAF Museum, Hendon (courtesy of the RAFM Director General Peter Dye OBE).

This year, the symposium is planned to focus on Aviation in the Great War and Allied glider operations in the liberation of Europe. Further details of the programme will be circulated once these are confirmed. Tickets are not yet on sale, but prices this year have been held at £20 for HAA members and £30 for non HAA members. This represents outstanding value for a day at a prestige venue with an inspirational programme featuring top class speakers. Note that the price includes coffee or tea on arrival and a hot lunch.

And as in previous years, a waiver of the car-parking fee for those arriving by car has been negotiated.

Make a note of the date in your diaries now!

ADMISSIONS

As Upper Freeman

Squadron Leader Peter Vincent BOOTHROYD (OS)

Captain Robin Patrick COX

Tracey CURTIS-TAYLOR

Squadron Leader

Andrew James DALEY (AUS)

Stuart Garth HILSBERG (AUS)

Squadron Leader

Stuart Fraser HULLEY

Michael David RIGG

Captain

Paul Edward WESTON-JONES (OS)

As Freeman

Flying Officer

James Leonard CHAMPNESS (AUS)

Lord Gerald FITZALAN HOWARD

Thomas Andrew KINNAIRD

James Roderick MORETON

Neil Andrew MUNRO (AUS)

Professor Mandyam Veerambudi SRINIVASAN (AUS)

Dr Stephen Richard WICKS

As Associate

Jacqueline Frances HOWES

Cornelius Leon Stewart WILSON

ACKNOWLEDGED BY THE COURT

10 JULY 2014

REGRADE

To Livery

Wing Commander

Robert Gordon HENDERSON (NZ)

To Upper Freeman

Gary HERON

DECEASED

Terence Wallace BRADBROOK

Brian POWELL

Ian SAVAGE (OS)

RESIGNATIONS

Stuart BURDESS

Peter JONES (NA)

Gwyn MULLETT (OS)

Benjamin WILSON

FORFEIT ALL BENEFITS

Jeffery HOSKEN (NA)

Esther LAW

Robert LEROUX (NA)

Simon WAKE
The Master’s Message

DOROTHY SAUL-POOLEY

It seems only a few short weeks since the AGM and my Installation as your Master, yet already I am writing my third message of the six due in my year! My impression of the last few weeks is that the weather has been a lot kinder to us than previous last two springs and summers and although my own flying activities have been greatly curtailed by the exigencies of office, I have been aware of a good number of “flying days”. I am pleased to report, however, that I have been able to continue a reduced amount of flying instruction and testing and so far have actually managed over 100 hours of flying in the first half of 2014 (probably about 40% of my normal tally!)

Previously I have written about the CAA’s GA Red Tape Challenge and those of you who have been following this will have seen that the Panel have now issued their final report. A number of the recommendations in the report are surely deserving of our endorsement, although it remains to be seen whether the Government will heed the advice in the report. Additionally the CAA GA Unit has been set up and aims to deliver a better and more proportionate approach to regulation of GA. It is pleasing to note that an oft-outcome were to be achieved, then the required to be made by the CAA is echoed required by the Panel and the removal non-competitive in Europe and UK is recognised as rendering the UK recommended. Similarly the burdensome would be greatly enhanced. This would also been setup and aims to deliver a better and have an impact throughout Europe. The last outlook for flying training in this country report. Additionally the CAA GA Unit has been set up and aims to deliver a better and more proportionate approach to regulation of GA. It is pleasing to note that an oft-outcome were to be achieved, then the required to be made by the CAA is echoed by the Panel and the removal recommended. Similarly the burdensome 20% VAT imposed on flying training in the UK is recognised as rendering the UK non-competitive in Europe and recommended for removal. If these two outcomes were to be achieved, then the outlook for flying training in this country would be greatly enhanced. This would also have an impact throughout Europe. The last ten years have seen a significantly dwindling number of new licence issues and a regeneration of the industry is desperately needed.

On the social side of being Master, I have been enjoying some spectacular hospitality from our fellow Livery companies and also our affiliated units. Some of this may be in part due to the “honeymoon” effect following the grant of our Charter and name change. Some of it may be curiosity, as the idea of a lady pilot Master still seems a somewhat outlandish concept to some of the more staid and traditional companies! However, this has not been my experience when visiting our affiliated units and other military bases. Recently, sadly, I was unable to partake in a flight in a Tucano, because, despite the large number of lunches and dinners consumed, I was not heavy enough for the ejection seat! When I mentioned this at lunch to a fellow lady Master, she suggested that I should be sponsored in my chosen charity, to gain the necessary 10 pounds! Anyone like to offer me £10 to gain 10lbs??

A recent highlight was a visit (the Company’s first) to Southampton University, which is my alma mater and coincidentally, that of several of the others who participated in the visit. We heard a fascinating presentation from our first winner of the newly awarded Honourable Company of Air Pilots’ Saul Prize for Air Safety Research. The bursary will enable Dr Katie Platt to present her research paper on human factors at an international conference in Australia later this year. It looked at first as if my tour of the regions would also enable me to visit the conference, but sadly the dates are not quite coincident. Perhaps a member of the Company based in Victoria would be interested in attending?

Another highlight has been the most extraordinary Ironbridge weekend for Masters. This set of museums is fascinating in itself, but the weekend affords all of the Masters the opportunity to meet, mingle and interact in a wonderful way that leads directly to the formation of the Past Masters Association for that year – an organisation which will endure indefinitely for the participants and enables a horizontal relationship across all the 110 Livery companies, for the mutual benefit of all in the Livery movement. As a committee member of the newly formed association, I am really excited that I will have the opportunity to develop the ideas I have already expounded here to create opportunities for young people. I would like to work with the other companies to develop a database of potential sources of work experience to assist our young people.

Despite my plea to you in my last message, there was a mere handful of our Liverymen exercising their civic duty to vote for the Sheriffs. It is a colourful and impressive ceremony exhibiting the pageantry that makes the City of London unique. It also means that you missed the opportunity for the first tasting of our Honourable Company’s own label champagne premier cru! I have acquired a limited number of cases, some of which will be auctioned or raffled at company events to raise funds for my chosen charity, the Air Pilots Trust. You will recall that I nominated this charity with a view to raising funds for a scholarship. You will also perhaps recall that the IPM suggested at the AGM that anyone who mistakenly calls the Company by the old name (the “G” word!) or who uses an inappropriate acronym, should be encouraged to donate £5 to the Master’s charity! I cannot believe that you are all remembering to use the new name all the time and I urge your declarations of honesty -please send or transfer your “fines” to the office!

We will also have the opportunity to drink the champagne at the Bakers’ Hall supper in July and at the Shoreham Airshow Garden Party on 30th August (and I will conduct a raffle at each). As the tickets for the latter are selling fast, please ensure that you book your places (you may bring friends) as soon as possible: the presence of both flying Lancasters and the expected appearance of the Vulcan is a huge draw!

Meanwhile, please enjoy the summer weather and fly safely, whatever your craft, wherever you are based and whether for work or pleasure.
For the second year running the Company’s Livery Dinner was held in the magnificent surroundings of the Mansion House and was graced with the presence of the Company’s Patron, His Royal Highness the Duke of Edinburgh. The Dinner was preceded by a Court meeting at which eleven new Liverymen were clothed. Congratulations to Captains M H Gush, S A John, R G Thomas, Wing Commander R G Henderson, Lieutenant Colonel E F Kohn, Mr C F Sach, Mr A Covizzi, Mr K R Baldwin, Mr C O Simpson, Mr R S Stuart and Mr J R Isabel. A Master Air Pilot Certificate was presented to Captain G M Morgan and a Master Air Navigator Certificate was presented to Mr R Hornby. Following the Court meeting a champagne reception started the evening’s proceedings. The Patron, escorted by the Master and Immediate Past Master, circulated freely amongst the assembled Company, meeting Court members, the newly-clothed Liverymen and many others. Dinner in the wonderful Egyptian Hall was announced by Mr Ted Prior, the Beadle. The Patron, the Master and the Guest of Honour, Alderman and Sheriff Sir Paul Judge (representing the Lord Mayor), processed to their places on the Top Table to the traditional slow handclap. Other Principal Guests included Captain S Judah Master Mariner, Mr D Woods Master Fueller, His Honour Judge Brian Barker Recorder, Mr A Waddingham Sheriff, Mr C Walkinshaw Chairman The Air League, Captain L Young, Wing Commander K F Trasler Officer Commanding 101 Squadron RAF, Squadron Leader D C Mason Officer Commanding Battle of Britain Memorial Flight, Squadron Leader C B Talbot Officer Commanding University of London Air Squadron and Brigadier A Miller-Bakewell Private Secretary to HRH the Duke of Edinburgh. Decorating the Top Table were many of the superb gold and silver pieces from the Mansion House Plate Room, including a gold plated Jardiniere given by Sir Thomas Vansittart Bowater, Lord Mayor on the outbreak of World War 1, which was decorated with depictions of the flags of the Allies. During the meal music was provided by the London Banqueting Ensemble, who concluded their performance with a fantastic rendition of the Post Horn Gallop, played competitively from each end of the Hall, which was acknowledged with acclaim by all.

At the conclusion of the Dinner, after the traditional sung Grace and the passing of the Loving Cup, Toasts were proposed by the Master to the Queen and other members of the Royal Family. The Patron proposed the Toast to the Lord Mayor, the Sheriffs and the City of London Corporation. The recently elected new Warden Captain Colin Cox then welcomed the guests. He outlined their varied careers to date, which included the Master Fueller’s habit of indulging in high risk activities such as parachuting, taking up rugby at the age of 43, trekking to the North Pole and slogging to the South Pole. He concluded by proposing the Toast to the Company’s Guests.

In her speech, the Master began by noting that the evening was a very special and historic occasion for several reasons. She congratulated the Patron who had the tremendous distinction of being the Company’s first and longest-serving Liveryman. She continued “The Livery movement has long sought to embrace excellence and uphold high standards. Aviators have long been associated with the City and with the name of Honourable. Our Company is 85 years old this year and yet the first ever aerial passenger voyage in England took place right here in the City of London from the grounds of the Honourable Artillery Company. It was in a balloon 230 years ago in September 1784! Why was there not a Company of Aeronauts long before 1929?” She noted that the early aviators who founded the
Company had an enormous sense of purpose and a passion for excellence. Striving for excellence continued to be the theme of her speech – excellence within the profession, excellence in education. She observed that the Company did much to assist those on the path to excellence through the provision of scholarships and bursaries for a wide range of flying training courses. She remarked that "Already we are gaining more links with the City and we are hoping to have another first very soon. The City Livery Companies Skills Council is supporting our first ever Higher Apprenticeship for a flying instructor qualification. This Company scheme will enable a young person to become qualified and to be employed by the sponsoring flying school for at least a year." She then thanked Liveryman Peter Benmax for his most generous gift of a magnificent Loving Cup to commemorate the granting of the Royal Charter, she thanked the office staff and the Clerk for their hard work and energy in keeping the Company airborne and finally congratulated Liveryman Yvonne Truman who had attended every Livery Dinner for 25 years without a break, all the way from the Middle East. Reminding all present that the effect of excellence in education is everlasting, she proposed the Toast “Everlasting Excellence”.

Responding on behalf of the Guests, Alderman Sir Paul Judge said how delighted he was to respond to the civic toast and the toast to the guests on behalf of the Lord Mayor, after a very special evening, the Company's first Mansion House Banquet as Honourable. He noted that the Lord Mayor was very sorry not to be able to be present, being on her way to a banking conference in Brussels, but said that she had asked him to congratulate the Master on becoming the first woman Master of the Company. Noting that the Master was someone who makes every moment count, he continued "You have expressed some fairly trenchant concerns about the regulatory and bureaucratic weight falling upon General Aviation - and small businesses in particular. I endorse your position - not as an aviator, but as a businessman, who knows just how obstructive red tape is to getting business done, without ever losing sight of the need for the right regulation." He expressed
delight that one of the Master's objectives was to build and enhance the Company's links with the City and applauded the excellent work in setting up a higher apprenticeship for training a flying instructor that echoed the historic bedrock of the Livery - to train and to pass on values and expertise to the next generation. After describing some of the activities for raising funds for the Lord Mayor's Appeal, which included human table football in Guildhall Yard and attempting to break the world record for the largest pyramid of cupcakes, he concluded by saying that he had thoroughly enjoyed himself and was honoured to be present. He repeated some of the lines of verse spoken by the Master in her first speech to the Company and proposed the Toast "The Honourable Company of Air Pilots, may it flourish root and branch for ever."

Liverymen and their guests were then invited to join the Master for a Stirrup Cup before departing. Photographs of the Livery Dinner, courtesy Gerald Sharp Photography, can be viewed at www.sharpphoto.co.uk

The Master with the Principal Guests

The Loving Cup ceremony

A view of the top table

Concern over Loving Cup contents, is there any left?
Automation and picking up the pieces when it all goes wrong

UPPER FREEMAN CAPTAIN SIMON LEWIS CRMI

"Computers are incredibly fast, accurate and stupid, Humans are incredibly slow, inaccurate and brilliant."

This statement was made by Einstein in 1955 and is more relevant today, especially, in aviation, than it ever was back then. Despite the unprecedented safety levels we are fortunate to be currently experiencing, accident and incident data from the last 15 years highlight a disturbing over reliance on automation.

More and more, as Bill Voss of the FAA recently voiced, pilots are there to; "Pick up the pieces when automation fails" and "follow the flight director as they find raw information a mere nuisance."

For the pilots that fly their aircraft, manufacturers have different philosophies in their development of automation and its importance.

Compare for instance the airbus philosophy;

**Automation must not reduce overall aircraft reliability but should enhance aircraft and system safety, efficiency and economy.**

against that of Boeing;

**Automation is a tool to aid, not to replace the pilot.**

Unfortunately, as seen by a number of recent events, our over reliability with automation, is having huge consequences.

Allied with this is the **Startle effect**, which was one of the main contributory factors to the Air France AF447 crash.

The English dictionary definition of Startle is:

1) **To cause to make a quick involuntary movement or start**
2) **To alarm, frighten, or surprise suddenly.**

From the reading of the BEA Investigation it would appear that the two co-pilots were so surprised by the events unwinding before them, that even with a better understanding, they would still have been unable to react accordingly.

The crews overconfidence in the protections of the airbus meant that the pilot flying held the side stick fully aft for the duration of the descent into the sea. This was the pilot's **'quick involuntary movement.'**

So is it possible to train for this Startle effect so that we are better prepared should we ever have to cope with it?

The BEA Final Report into the AF 447 crash states:

"Generally, the exercises performed in a simulator follow a predetermined scenario, and even if there are variations from one session to the next, the trainees are more or less familiar with the failures they will have to deal with. In this respect, the training scenarios may significantly differ from the reality of an in-flight failure. The startle effect associated with this operational reality is destabilising and generates stress. It may have a direct impact on the correct execution of a manoeuvre, or on the ability of a crew to diagnose the problem and then recover the situation. However, the conditions in which training is delivered are not conducive to giving instruction in these environmental factors, and thus to the subsequent application in service of the non-technical skills necessary for the correct management of an unexpected situation."

Several UK airlines have adopted a form of recurrent training for their pilots that allows them to tailor training sessions to the carriers specific needs rather than following a rigid statutory testing routine. This is known as ATQP, and easyJet is one such operator.

ATQP allows an operator to spend time doing more realistic and relevant training during the LOE. This includes giving pilots surprise failures to deal with. Our day to day defences against it are very similar to the defences that we must use to counter our over reliability of automation - airmanship.

Remember some of the airbus golden rules?

3) **Aviate, Navigate and Communicate**

4) **Use the appropriate level of automation at all times**
5) **Understand the FMA at all times**
6) **Take action if things do not go as expected.**

To these maybe we should add:

5) **Beware of under arousal and boredom**
6) **Stick to SOP's.**

It is rare to read about how crews coped successfully with a major failure of an aircraft's automation. However, the safe outcome of the recent Air Asia A330 pitot tube failure highlights the importance of one other golden rule:

7) **Know your aircraft's automatic systems and recognise what they do and don't do for you.**

This understanding and knowledge of the aircraft, kept the Eva Air A330 flying and which unfortunately, contributed to the loss of life aboard AF447.

Editor's note: The article in the June issue of Air Pilot "Automation and the Human" generated this response from one of our members who is a current commercial pilot with easyJet.
If all goes according to plan, on the morning of 13th August 2014, a small two-seat biplane will touch down on a grass runway at Amiens in France. The arrival of our 'Biggles Biplane' BE-2c replica will form part of the Great War centennial commemorations in conjunction with the RAF and the Western Front Association and it will mark the arrival, one hundred years previously to the day, of similar Royal Aircraft Factory BE-2 army observation aircraft which changed the history of aviation. It was the first-ever deployment by air overseas.

There isn't a great deal that is obviously warlike about the BE-2. For a start the fabric-covered wooden biplane is unarmed. While the concept of airmen actually trying to shoot one another down had been formulated by 1914, the simple fact was that with a mere 80hp engine, payloads were so restricted that you could carry a machine gun or an observer, not both. A topspeed of about 70 mph doesn't sound a great deal today either, yet the “BE” was in every way a trend-setter of the time.

It was developed at the Royal Aircraft Factory at Farnborough in England, still today the home of the famous Farnborough Air Show. Its designer, who also first flew the prototype in 1912, was Geoffrey de Havilland. He went on over the decades to create iconic aircraft such as the Tiger Moth and Mosquito of the Second World War and the Comet, the world's first jet airliner, but the BE-2 was both his and the world's, first purpose-designed military aeroplane.

The letters 'BE' stood for 'Bleriot Experimental', officially describing the layout of the aircraft with the engine and propeller at the front and (to our eyes) conventional tail surfaces, as defined by the most successful type at the time of its inception, the monoplanes devised by Frenchman Louis Bleriot. However, unlike the Bleriot and other contemporary types such as the Wright and Farman biplanes, the BE-2 was the first-ever naturally stable aircraft.

While Bleriot and Wright types required constant input from the pilot to remain anywhere near straight and level, let alone contemplate manoeuvring, the pioneering use of wind tunnels and the new science of 'aerodynamics' at Farnborough allowed the BE to be “trimmed” to allow the pilot to also carry out other tasks. The most important of these was reconnaissance, as a few forward thinking Army officers had realised that aeroplanes could offer a rare opportunity to see what the enemy might be doing "on the other side of the hill".

In 1912 the newly-formed Royal Flying Corps began proving the aeroplane's worth to older, more sceptical senior officers. One Army chief of staff famously described aviation as “a useless and expensive fad advocated by a few individuals whose ideas are unworthy of attention”, yet by the outbreak of the First World War on 4th August 1914 the new Corps numbered four squadrons (plus No. 1 Squadron, dedicated to the use of balloons and man-lifting kites) and plans were made to fly no less than 60 aircraft across the channel to support the British Expeditionary Force in France.

It should be remembered of course that this was just five years since Louis Bleriot's pioneering channel crossing and in the intervening period probably less than 50 pilots had successfully emulated his feat. It should be remembered too, that aerial navigation was equally in its infancy. At best, a pilot had a rudimentary compass, often strapped to his wrist and a cockpit watch, while the maps for each side of the channel were respectively provided by Ordnance Survey and Guides Michelin! Number 2 Squadron was delegated to lead the three squadrons which were to make the crossing. At their head was the impressive figure of Major Charles Burke, a huge barrel-chested Irishman whose girth frequently had led to marginal take-offs and heavy landings, but whose military skills had already moulded his squadron into a well-disciplined unit.

One of the potential exceptions to this was...
Lieutenant Hubert Harvey-Kelly, whose baby-faced smile masked an irreverent and highly competitive spirit. There were strict orders that “all aeroplanes were to take off and land in Squadron order”, but there was already speculation (and some betting) among the airmen that Harvey-Kelly would get there first.

At 06.25 precisely, the first overladen BE-2 staggered into the air from Swingate Down atop the white cliffs of Dover. Many of the townsfolk turned out to watch “the aerial array” of machines as they clawed for height, to give maximum gliding distance in case of engine failure. “It was very clear” Major Burke recorded in his diary “I could see the French coast at once.”

However, as Burke headed along the French coast before following the River Somme to Amiens, he could only see ten of his eleven squadron aeroplanes behind him. “Then as I turned to land, there was an aeroplane ahead of me” Burke recorded.

It was Harvey Kelly, who had flown a direct compass course across country, beating his commanding officer by two minutes. Major Burke was apparently initially furious at taking second place, but according to one authority: “That was overtaken by euphoria at the unprecedented achievement of all the aircraft arriving. H-K had got away with it again”.

Assuming we get safely to and from Amiens without falling into the ‘oggin’, one of the next appearances for the Biggles Biplane replica will be flying with the Great War Display Team at Shoreham Air Show, which also hosts the Air Pilots garden party. Do please keep a look out for the BE-2 as well as our supporting vehicles on the ground.

Then, just as now with a specially liveried Vauxhall Zafira Tourer which acts as our modern day support vehicle, Vauxhall Motors was at the forefront of such activities. Over 1,500 examples of the Vauxhall D Type staff car were built to the order of the War Office. At Shoreham, look out for one of the rare survivors of the breed from the Vauxhall museum. You never know, we might even persuade our Master to take a quick drive!
Editor's Note. The letter below is published courtesy the New Zealand Region. References to the 'Guild' were correct at the time of writing and the Region itself is in the process of updating its title to reflect the current Honourable status of the Company. It is good to know the Company's influence is being felt to good advantage on the far side of the world.
Pitt Meadows is a growing community located in the Fraser Valley region of British Columbia’s lower mainland, approximately halfway between the downtown Vancouver and the city of Abbotsford. Pitt Meadows Regional Airport, with its breathtaking view of the Golden Ears Mountains to the north, is positioned on the north bank of the mighty Fraser River about two miles east of the confluence of the Fraser and Pitt Rivers. It occupies a 646 acre site comprised of three paved runways and a water runway along with a float plane launch ramp and docking facility. The airport has its own control tower, which operates daily from 07:00 hrs to 23:00 hrs PDT. Outside of the published control tower operating hours, the Pitt Meadows Class “C” control zone reverts to a Class “D” control zone. Pilots using the airport after hours are required to report their intentions on the VHF 126.3 MHz. Two of the runways are equipped with lighting for night flying operations. One bit of good news for first time pilots visiting from Europe is that in common with most general aviation airports in Canada, there are no landing fees at Pitt Meadows Airport. The airport is very convenient for general aviation pilots visiting the spectacularly beautiful city of Vancouver, as well as the recreational areas surrounding Pitt Lake.

Pitt Meadows Airport is the home base of Island Coastal Aviation, owned and operated by Tom Dryborough, President and Chief Float Plane Flying Instructor. Tom is assisted by his wife Kristene, who is the Company Operations Manager and Person Responsible of Maintenance (PRM). I recently met up with Tom, to talk about his very popular and successful school for teaching aspiring float plane and bush pilots.

From the very first time meeting Tom, one can immediately tell that he is a real enthusiast, when it comes to teaching floats and bush flying. Since Island Coastal Aviation was established at Pitt Meadows in 2008, Tom has given float ratings and taught advanced float plane rating courses to literally hundreds of pilots, including a British Airways former Concorde pilot, a RAF Harrier pilot, many airline pilots from all around the world, as well to pilots who have just recently qualified for their Private or Commercial licences. Apart from Tom’s amazing teaching skills, both Tom and Kristene are the most welcoming of hosts to the many pilots, who arrive from overseas each year to learn float flying in one of the most scenic parts of the world. This can be evidenced by the many testimonials on the company website. www.islandcoastalaviation.com

Island Coastal Aviation operates a Cessna 172 with power flow exhausts, increasing the horsepower of the Lycoming engine to 173 hp from 160 hp. The aircraft is equipped with EDO 2130 floats to allow the aircraft to operate at the normal C172 gross weight of 2300 lbs.

Learning to fly floats with Tom, not only does the pilot get the best of flight instruction in this type of flying in Canada, but also experiences a huge variety in types of float plane and bush flying operations, from high altitude alpine lakes to fast flowing rivers, (8 knots during the snow melt spring season), and to the open sea water of the Pacific Ocean. The student float plane pilot learns to avoid potentially nasty encounters with floating ice, partially submerged logs (deadheads), fishing boats and their nets, pleasure craft and the local sternwheeler, which produces a particularly nasty sine wave wake, just to name a few.

Tom teaches several courses starting with the Canadian Sea Plane Rating. This is a seven hour course as per Transport Canada requirements. For pilots who already hold a Sea Plane Rating, Tom offers an expanded proficiency course and for those pilots entering the world of bush flying, flying floats or seaplane flying as a career, Tom offers a fifty hour course. Student commercial pilots often opt to do this course as part of their time building towards the two hundred hours required to qualify for a Commercial Pilot Licence.

Practical training and experience rather than a lot of ground school theory is the method Tom uses to teach his students. Identifying the wind and resulting drift using wind streaks on open water; the apparent changes in colour of leaves on the trees on a river bank or along side a lake are useful tools to have in your bag, if you are a float or seaplane pilot operating in the Canadian wilderness.

Training commences with launching the school aircraft from the ramp into the sometimes fast flowing Fraser River. (The Fraser River was named after the famous explorer of this part of the world, Simon Fraser, descended from one of the soldiers of the Fraser Highland Regiment that was raised at Inverness in 1757 for service in North America during the French Indian Wars.) The river, which is more than 1000km long, is one of the best salmon bearing rivers in Canada. Tom insists that the ignition is switched on before leaping into the aircraft. There is no time to be fumbling for the keys once the aircraft is subjected to the wind and currents of the fast moving river. Don’t forget to deploy the water runnings, says Tom, otherwise you might be swept quickly down stream out of control into one of the supports of the new Port Mann bridge! Taxing the aircraft has its challenges. Unlike a land plane, there are no brakes on a float airplane! Proficiency in safe taxiing includes step taxiing, step turns, docking, tying up and beaching.

Practice in take-offs and landings initially takes place in the Pitt River and at Pitt Lake. Later in the course, Tom takes his students to Sproat Lake on Vancouver Island, where Coulson operate the Mars water bombers, the largest flying boats in the world. Then comes the high density altitude take-offs and landings at the many alpine lakes in B.C.

All too soon the students, who come from as far away as Korea, Japan, Denmark, South America, Australia, South Africa, Spain, the UK and many other countries, have completed their training and are sad to say goodbye. Others stay on to perhaps find a flying job working for a remote logging camp or guiding company. Many return on a regular basis for recurrent training or just for the fun and beauty in flying seaplanes.
Company Visit to Paris

LIVERYMAN PAUL SMIDDY

Most of the party assembled on Monday evening for dinner on board a Bateau Mouche to see the delights of the City of Light from the waterside. A convivial evening was had by all - well all apart from this writer who had butted a head wind down to St Cyr L’Ecole, a charming little airfield to the west of the capital. Anyone who has flown (VFR) into the Paris area knows that the last few miles are rather busy. I just had time to enjoy one of the most beautiful base legs I have encountered - it took me right over the Grand Canal, the stupendous cross-shaped water feature in the grounds of the Palais de Versailles.

But to business: the full group (with one couple missing) assembled by our coach at the Arc de Triomphe on Tuesday morning. Organiser (or should that be chef d’équipe?) Master Elect Chris Ford told us that the absentees were in conversation with the Gendarmerie - Sue Ingle had unfortunately witnessed the darker side of the French capital when she had her handbag stolen from her feet whilst at breakfast in her hotel.

With Dassault management unaccountably having found a more pressing use for their time than presenting to us, we were on our way to Thales Systèmes Aeroportés, (better known as the home of Defence Mission Systems), coincidentally just beyond Versailles. The switch of destination was to our benefit, as the red carpet was metaphorically much in evidence. We were welcomed by Alain Duhamel, VP Defence Marketing and Sales. With the aid of the corporate video, he gave us an overview of the Thales group: 67,000 employees spread over 50 countries, although half are in France (and 9,000 in the UK). 75% of its €14bn revenues derive from overseas. After a steady stream of acquisitions (Racal, Pilkington, and elements of Phillips) it now claims to be the second biggest UK defence player. Just over half of its activities are related to defence and security, the rest being civil aerospace and transport. In a week when the Elysée was doing its best to circumvent EU laws and enact some hurried legislation to prevent GE acquiring Alstom’s power business, it was interesting to note that Thales has a relatively bid-proof shareholding structure (with 27% in the hands of the French Government). Other highlights of Thales’ profile? First in Air Traffic systems, first in Europe in avionics, first in Europe in Defence Electronics, and number 2 in IFE (which we now know means In Flight Entertainment systems). It was an acronym rich morning!

Current projects that underline its pre-eminence include the Top Owl helmet-mounted sight, Hawkei - a light protection vehicle for the Australian forces, sensors for the Astute subs, and finally acting as co-prime contractor for the CVF aircraft carrier. A very topical programme, which elicited much questioning from the alert visitors, is the €1bn Watchkeeper UAV project, where we were left in no doubt that this was “the only UAV certified to fly in Europe”! The Thales perspective is that, by 2030, a third of Western European air forces will be comprised of UAVs.

Next on the podium was Jean Michel Eustache, with 20 years’ FAF experience under his belt, who presented on their ISTAR activities, and gave more detail on Watchkeeper. 16% of their workforce is in the UK, where its turbo-prop is produced. Coming from left field, as ever, John McAdam suggested to MEustache that his UAV baby would be perfect for the anti-poaching safari park market. A recommended retail price was not forthcoming! In a bout of intense questioning, we pursued the evolution of Watchkeeper’s integration into civil airspace. It seemed clear that this had proved one of the major stumbling blocks of the programme.

We shifted to the Rafale (where Thales produces 25% by value of the finished product). Pascal Bourretère, another ex-
issues emerging with trying regularity, he focused mainly on Anglo-French interests and efforts in Sub-Saharan Africa. Trying to encourage HMG to adopt a more holistic approach to this region would appear to be an ongoing trial. The DA's workload is heightened by the round of commemorative events about to start; his team has to organise and mollify dod no fewer than 22 VVIPs (& spouses) for the 70th anniversary of D Day, for example. With his Air Attaché, Wg Cdr Dan Ingall, John initiated a Q & A session, where the questions were direct, and the answers most frank. We are in his debt for such a stimulating afternoon. Even more so for the copious champagne that we then enjoyed overlooking the Embass y's glorious garden. The Master and her entourage then dined with Air Cdre and Mrs Maas; the hoipolloi chanced their arm in Paris' restaurant scene. Wednesday saw a prompt start from the Arc for our visit to the Musée de l'Air at Le Bourget. Too prompt as it turned out, since we arrived 15 minutes before opening! Undeterred Wally Epton prised open volume 5 of his virtual contact book and suggested a few of us join him in seeing the new offices and hangar of one of his bizjet buddies, "just up the road", and so we were treated to a brief tour of the facilities of Universal Aviation. There was a quintessential peep into this rarefied world when a Bentley drew up at the portals, a silver fox of a captain who looked even more distinguished than Past Master Epton, were that feasible, leapt to his feet to grab the bags of a svelte 40-something couple and escort them to his machine. Back to the museum at a gallop and we benefited from one of the most authoritative tour guides one might imagine, Pierre Bremard, a retired AF B747 captain. The recently refurbished museum is an absolute joy, and Pierre enlivened it further with plenty of anecdotes about the early years of aviation. There was some typical French oversight in some of the captioning - e.g. crediting one Jean Marie le Bris for the first heavier than air (glider) flight in 1856, when this Yorkshireman always thought Sir George Cayley achieved that feat a couple of years earlier! The mocked up Antoinette factory and pre WW1 area will provide a stiff yardstick for the new (old) Graham White building at the RA F Museum. Facts poured from M. Bremard - why the B747 flight deck is so high, that its designed hull flight time was 100,000 hours as against 5,000 for the Jaguar (a few yards away), and so on. We completed the tour by seeing 2 Concorde s alongside each other (a prototype and a production example, the latter 47 tonnes heavier). A morning was not enough to do justice to this impressive museum - I suspect many of us will be back.

A much needed lunch was taken at Chez Françoise, underneath the old Air France Terminal building in Les Invalides, in their Salon des Premiers Ministres, no less. The Master gave another speech in verse, and at the end of the meal Chris Ford continuing as whipper-in, took the remnants off to tour the national and military museums of the Invalides (an amalgam of St Paul's and the IWM, in British terms). For a very enjoyable and enlightening visit to the City of Light, Chris Ford deserves much credit. As Master Pooley commented - "if he can do such a good organisational job as Master Elect, think what he can achieve during his year!"

"...the most beautiful base leg ever..."
Company Visit to RAF Benson

ASSISTANT JOHN TOWELL

Group Captain Nigel Colman OBE MA
RAF, Officer Commanding RAF Benson
kindly invited a large party of forty two Air
Pilots to visit RAF Benson on 28th May.
The visit was arranged in conjunction with
the Air Pilots Flying Club and priority was
given to Flying Club members. The
opportunity attracted great interest and
apparently the Flying Club membership
increased as a consequence! Wednesday
28th May dawned wet and cold with low
cloud and poor visibility so most pilots
decided to abandon their plans to fly in and
made their way to Benson by road. Several
members took advantage of the kind offer
of an overnight stay in the Officers' Mess. A
few hardy souls in three aircraft did manage
to fly in.

On arrival we were welcomed and given an
overview of the station by Wing
Commander Hamish Cormack OC 230
Puma 2 Squadron on behalf of Group
Captain Nigel Colman. Benson has a proud
history and the blue PR Spitfire gate
Guardian is a reminder of former occupants
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Commander HamishCormack OC 230
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Captain Nigel Colman. Benson has a proud
history and the blue PR Spitfire gate
guardian is a reminder of former occupants
who took the photographs of the damage
after the Dam busters' raids. The King's and
Queen's Flights were based at Benson for
many years and there is a long and proud
history of royal service.

The role of RAF Benson in 2014 is to
support the UK Army on worldwide
operations and exercises. The station focus
is on contingent operations. To achieve the
task 2000 people are based at Benson (4500
people including their families). Four
helicopter squadrons, 28 and 78 Merlin and
230 and 33 with the new Puma HC2. The
range of operations supported in recent
years has a huge spread from Iraq and
Afghanistan to the arctic, deserts and
jungles. Change is a constant factor in life
and later this year the Merlins will be
transferred to the Royal Navy at Yeovilton.
The Puma is the future for Benson and the
new HC2 version is a great advance on the
earlier version. It has a modern glass cockpit
and new engines. During the London
Olympics Puma was deployed to a forward
base to provide the ability to intercept low
and slow aircraft. A big advantage of Puma
is that it can be deployed worldwide rapidly
and 2 Pumas can be loaded inside a C17.

Transporting Chinook and Merlin by C17
involves a lot more work and time spent
dismantling and rebuilding. The Puma can
be operational within 4 hours of arrival for
quick response to disaster or evacuation. It
is possible that in the future as the Chinook
fleet expands that some may be based at
Benson. Other units based at Benson
include Oxford University Air Squadron, 6
Air Experience Flight, Police and Helimed
helicopters.

Squadron Leader Christian Royston-Airey
who had gone to considerable efforts to
make our visit so memorable then
explained the rest of the programme before
lunch. Our party was split into three smaller
groups and we were taken by bus to visit
Merlin and Puma squadrons and the
Tactical Control Centre.

We were given a brief on the Merlin by
Squadron Leader Phil Holdcroft OC 78
Squadron. The Merlin Mk3 and Mk3A
have been involved in Bosnia, Iraq and

AFghanistan. Merlin can carry a 4000kg
payload and cruise comfortably at 120kt
with a maximum speed of 149kt. Normal
endurance is 4 hours with up to 5 hours for
ferry. 78 Squadron was formally stood up at
a ceremony held on 24 January 2008.
Formerly based in the Falkland Islands, the
Squadron was re-formed at RAF Benson to
accommodate the additional personnel that
were required when Benson acquired 6
new Merlin MK3a from the Danish
Government under a Memorandum of
Understanding. With three operational
Flights (A, B and C Flights), 78 Squadron
form the Merlin Force alongside 28 (AC)
Squadron which officially reformed on 17
July 2001 as home to the Merlin helicopter.
28 Squadron has developed to incorporate
A and B Flights, which are the operational
Flights, and an embedded Operational
Conversion Flight on C Flight.

At 33 Squadron Flight Lieutenant Ellie
Hoogewerf showed us around a Puma HC2
undergoing maintenance alongside some
earlier Pumas which were mothballed. In
June 1997, 33 Squadron took up residence
at RAF Benson, and was joined in February
1998 by the Operational Conversion
Flight, formerly part of 27 Squadron. The
Squadron’s colourful history, encompassing
many types of aircraft and roles, underscores
the proud tradition that 33 Squadron
maintains today. Whether assisting civilian
authorities in times of crisis or supporting
UK land forces, the Squadron continues to
play a significant role within the RAF. In
November 2009, 230 Squadron took up
residence at RAF Benson, co-locating the
Puma Force for the first time in over 20
years. The ‘Tiger’ Squadron has an
illustrious history, encompassing many
aircraft types and roles, having successfully
served in many places such as Egypt,
Greece, Germany, and Northern Ireland.

The visit to the Tactical Control Centre was
especially interesting as we were shown
how helicopter crews are given advanced
simulator training. In the building at
Benson there are six helicopter simulators which can be used as stand-alone training devices in the conventional sense. The centre also has the ability to allow the crews in each simulator to fly in formation and interact in complex scenarios with each other. To further develop the scenarios instructors at the role playing desks in the centre can simulate and control other assets, both friendly and hostile, which are interactive in the role play. These might include Tornados, Migs, SAM batteries, or an aircraft carrier. There is the usual ability to move to many different locations with different terrain and to experience all types of weather. The training helps crews develop skills at using terrain and weather for stealth and protection and complex team working skills. As if that were not enough the centre can datalink with a handful of other similar centres around the world to play out even more complex scenarios. Overall a tremendously powerful training tool, which is also used by crews from other nations, some travelling large distances to take benefit.

After a busy morning were returned to the Officers' Mess for lunch where we enjoyed an excellent curry. The standard of catering and service at RAF Benson was of a very high standard. After lunch Squadron Leader Chris Royston-Airey had another interesting programme ready for us with visits to RAF Benson Flying Club, Oxford UAS and AEF and to the Police helicopter unit.

We were shown the aircraft of RAF Benson Flying Club in the hangar by Squadron Leader Brad Hewitt of 230 Sqn. The Club exists to provide flying training and low cost light aircraft flying to members of the Armed Forces, and in particular to offer these opportunities to the junior ranks. This includes members of the RAuxAF and the Reserves, Volunteer Reserves, Cadet Forces and all former members of all 3 services. Members of the Armed Forces of other nations serving with British Forces in the UK are also eligible for membership. There are also limited opportunities for civilian membership, particularly for those who hold instructor or examiner ratings and are willing to offer these services to the club. In the hangar were the usual PA28 and C 152 types as well as a part made Junqua Ibis RJ03 tandem two seat pusher canard light aircraft. This exotic aircraft was displayed by the builder who is a Club member.

We then visited Oxford University Air Squadron and No 6 Air Experience Flight where Flight Lieutenant Darren Legg led an interesting interactive discussion about their objectives and the challenges that they face. The UAS has around 60 students who are each allocated about 10 flying hours per year and they work towards a NPPL but only about 10% achieve the licence. In total the UAS fly about 400 hours pa and the AEF about 2500 hours pa. The AEF objective is to give each cadet a 20 minute flight every year with 6711 cadets aged between 13 and 18 in their catchment area. Interestingly there are around 10,000 adult volunteers who work to run the cadet force. The aim is to have 35 to 40 pilots on the AEF with around 50% being current service pilots and 25% ex-military airline pilots on voluntary reserve commission and several ex-service pilots who do not fly professionally.

Our final visit was to the Police helicopter which had returned from a recent call out which occurred when the previous group were visiting. They were able to watch the crew scramble the helicopter in quick time and depart into unpleasant weather on their mission. Ken Bridge, the duty pilot explained that there are four pilots at each base one of whom will also move around other bases when required and they operate two shifts in each 24 hour period. The helicopter is operated single pilot with a police officer in the right hand seat managing sophisticated cameras and GPS systems.

One of the Air Pilots most recent members is Captain Steve (Smurf) Smirthwaite who thoroughly enjoyed his first Air Pilot visit. He was delighted to meet up with former colleagues and relived memories of his years based at Benson flying Wessex and Whirlwind. He even found old photographs of some of his exploits on the squadron notice board and was delighted to be going home with a copy of them.

After a full day of interesting visits we all came together for a farewell from Wing Commander Karl Mahon, the Officer Commanding Base Support Wing at RAF Benson on behalf of Group Captain Colman. The Master gave a vote of thanks for a wonderful day to acclaim from the group. The standard of organisation and hospitality throughout the day was very high. Special thanks are due to both Squadron Leader Chris Royston-Airey, and to Liveryman John Davy for organising such a successful visit.
Company Visit to Brize Norton

LIVERYMAN ROBIN KEEGAN

On Tuesday 20th May, the Master and twenty nine members of the Company paid one of the now regular visits to RAF Brize Norton by kind permission of the Station Commander, Group Captain Steve Lushington.

Since it opened as a grass airfield in 1937, Brize Norton has grown year on year and has now become the largest base in the RAF. The closure of RAF Lyneham has helped to swell the numbers and it now accounts for approximately 20% of the RAF. Over 7,000 people are employed there including 5,200, service personnel, 1,000 MOD and civilians plus assorted others. All military personnel departing for overseas theatres begin their deployment from Brize.

The day began with a visit to the C130 Hercules training centre where we were welcomed by Wing Commander 'Doz' James together with Flight Lieutenant Ian Tremblin who had drawn the short straw and was to be our chaperone for the day. The C130J is the current model and can be operated by a crew of three. It sports a glass cockpit with FMS which many commercial pilots would recognise plus a head-up display. Training on the type uses a 'tier' system and encompasses strategic air transport plus tactical air transport and includes the use of night vision goggles. The aircraft has also been used to fill the gap in the search and rescue capability created by the loss of the Nimrod fleet although its capabilities in this role are rather more limited than the Nimrod relying in no small part on the Mk 1 eyeball.

24 Squadron began life on 21st August 1915 as a fighter squadron based at Hounslow and during its time has taken part in operations such as the Berlin Airlift. It is now the Air Mobility Operational Conversion Unit for the C130. 'A' Flight carries out the training using two dynamic mission simulators and also uses lessons gained from civil air transport. 'B' Flight trains the Tactical Air Transport part of the course whilst 'C' Flight is kept busy writing the new courses in anticipation of the introduction into service of the Airbus Industries A400 which will replace the Hercules in time. In addition, there is a full scale mock-up of a rear cabin so that all aspects of a mission may be taught and practised such as changes to configuration and correct stowage of cargo etc. There is no doubt that the 'Herc' has been an invaluable workhorse but operations in the aggressive conditions in places such as Afghanistan have taken their toll on the fatigue life of the aircraft and it will now leave service rather earlier than had been previously planned.

The day moved on to visit 99 Squadron and the mighty Boeing C17 Transport. We were met by Flight Lieutenant Belinda Wall who has a command on the aircraft. She is an enthusiastic ambassador for the aircraft who delights in telling the assembled group that the C17 is able to carry a greater load on its rear cargo ramp alone than the entire capacity of a C130! A visit to the flight line and the opportunity to walk around the aircraft is quite an awesome experience. Among its many 'virtues' is the ability to reverse pairs of engines in flight to create a rate of descent in excess of 20,000 feet per minute! For those of us used to flying large Boeings which have a system of interlocks attached to the thrust levers specifically designed to prevent selecting reverse thrust in flight, this capability can only be marvelled at although it must make the flare and round-out rather interesting! Of the total UK C17 fleet of eight aircraft, one is usually undergoing heavy maintenance in the USA, one on maintenance in the UK which usually leaves six operational aircraft so we were especially lucky to see three together at Brize.

Following an excellent lunch in the Officers Mess, the final visit of the day was to 101 Squadron which is equipped with the Airbus A330-200. This, of course started life as a civil airliner but will now, in modified form, be the mainstay of the RAF Air-to-Air Refuelling (AAR) capability for
the 21st century replacing the Tristars and VC10s. This aircraft type is known as the Voyager and we were briefed as we sat in the ‘Voyager Hub’ which is a very smart new complex of hangar, operations centre and offices. As many will know, the whole operation is run by Air Tanker Limited as a Private Finance Initiative (PFI) contract sponsored by a consortium of Airbus, Babcock, Cobham, Rolls-Royce and Thales. The PFI contract was signed in 2008 with the first AAR operations in May 2013. The operation has an unusual structure using a mixture of RAF and some civilian personnel flying the aircraft who are listed as sponsored reserves. It is run as an airline serving the South Atlantic with an Air Operators Certificate issued by the CAA and 180 minutes EROPS clearance. The most obvious modifications to the aircraft are the AAR drogues fitted beneath each wing and under the rear fuselage. These are currently manufactured by Sergeant Fletcher although they may be replaced by Flight Refuelling units at a later date. The aircraft has a standard single class layout with 291 seats at a very reasonable 34 inch seat pitch and standard airline galley units. Less obvious modifications are some extra fuel pumps to service the AAR requirement and the removal of the forward galley to create more space in the cockpit for extra AAR mission equipment. Unlike other aircraft types, the Voyager has not needed extra fuel tanks to be fitted for AAR operations as it uses the already capacious fuel tanks that come as standard which give the aircraft a range of 5,400 miles. The hold space can accept up to eight NATO pallets and the aircraft can be fitted with two basic medical beds. Currently, AAR operations can be carried out at any level between FL 100 and FL 250. Looking to the future, Air Tanker anticipates a total fleet of 14 aircraft by 2016 with a core fleet of nine, 8 on the military register, 1 on the civil register and 5 available for charter although it appears to be a relatively simple task to move the aircraft between military and civil registers as the demand requires. Future capability enhancements envisage equipping the Voyager for aeromedical and critical care patients and the ability to carry out high level AAR. Sadly, unlike some previous visits to Brize Norton, there were no aircraft available to allow the assembled Company to experience live AAR operations.

And finally…

We were briefed about the construction site for the new hangar complex to house the Airbus A400. Apparently, 39 newts currently occupy the site and will have to be ‘re-housed’ at two new sites at an estimated cost of £1.5 million!
It was a day for looking back, but also very much forwards. The Company was privileged to spend a day at Linton, home of 1 FTS, the kernel of the RAF's fast jet training stream. Seventeen Company members arrived in good time for the 1000hrs start. Three aircraft flew in, each with a different arrival procedure! My VFR arrival circumnavigated the odd bit of stratus; Diana Green and John Davy enjoyed a PAR, whilst Peter Greenyer had another IFR arrival. Interestingly the weather was not then judged yet good enough to send off any from the Tucano flight line!

We were given a warm welcome by Group Captain David Cooper, the Station Commander, who left us in no doubt of the proud heritage of 1 FTS - founded at Netheravon, and on a journey around 5 bases until its arrival at Linton in 1957. Linton itself has a resonant history: a pre-war expansion scheme airfield it played its full part in the exploits of Bomber Command, of which more anon.

David Cooper left us in no doubt that his was a happy station; moreover he was more than content with the quality of students that were passing through his wings course - "outstanding young people". In a telling aside, he pointed out that "whilst a Battle of Britain Spitfire pilot has an influence of 1 mile radius in the battlefield, these days it is more like 300 miles".

David is a busy host: Linton also looks after the airfield activities at Topcliffe (now home to 4RA), and Dishforth (9 Reg AAC). It also now hosts the Yorkshire University Air Squadron (whose students are "a credit to the youth of today"); the Yorkshire Air Ambulance; an AEF and 642 Volunteer Glider Squadron; the Tucano and Glider Support Authorities; Air Cadets Regional HQ (North); the European Defence Agency Interim Synthetic Helicopter Tactics Course; and a semi-secret squirrel police unit. This panoply of airspace responsibility means a rather large ATC unit, with nearly 80 staff. He emphasised the close links with the local community - the airfield is physically interwoven with the village, and many locals are members of the messes. Such close liaison must help when one operates an aircraft with possibly the most irritating sound in the air force - the Tucano!

He handed over to OC 72 (R) Sqn, Wing Commander Baz Dale. Again history was to the fore: 72 was founded at Netheravon on July 2 1914 as a training squadron - so it has returned to its roots after a flirtation with Gladiators, Spitfires and Pumas. Baz takes pupils with 55 hours of Tutor experience, and gives them 124 hours of basic FJ training on the Tucano before they progress to the Hawk at Valley. Like the rest of the RAF's training pipeline, 1FTS has been subject to great swings in its number of customers, but the unit is on the upturn - 26 students graduated in 2013, but this should increase to 36 next year. There is a mix of RAF and RN pilots, with a lone overseas student (from Qatar), however a significant number of Saudis are expected this Autumn. Having done the EFT course, and been in the UK for some time, it is not expected that the Saudis will suffer too many assimilation issues. There should be 50 QFIs on establishment by the end of 2014 - an admirable teacher/pupil ratio. The instructors typically arrive with a B2 cat, and are upgraded during their tour. Linton holds 51 airframes, of which 11 are currently held in reserve. As one might expect there are plans to extend the fatigue life of these venerable craft from 4,800 to 6000 hours.

The Group Captain was very mindful that he had an esteemed predecessor in the audience, none other than your editor. Tom enquired how the demands for "pilots" for Predator & Reaper were to be met. The answer - at the end of each course one pilot is volunteered for that route. David pointed out that it will be no bad move for such a pilot as when he/she is integrated back into the Typhoon stream, it will be useful to have someone with above average knowledge of ISTAR.

Company members were split into two groups: we headed for the base's Memorial Room for a tour with Alan Worby, a retired Tucano QFI and now an enthusiastic guardian of this treasure trove. The archive had been created by Sergeant Bill Steel in the Fifties, after he had been collared by a returning Canadian at the main gate who asked him where the (then non-existent) Memorial Room was to be found. Steel created records detailing each of the 1,200...
aircrew from Linton who lost their lives in WW2. It was, as Alan related, “a real labour of love”. Linton opened in 1937, but not with an Officers’ Mess until after the outbreak of war, it was only the second Bomber Command field to be given hard runways - this was due to its “on Ouse” often being “nearly under the Ouse”. One of the 2 bomber squadrons was 35 (Madras Presidency) Sqn - Leonard Cheshire’s, and we were treated to an explanation of how bombing techniques evolved through the war. In 1943 Linton was handed over to the RCAF and was the home to 2 Canadian heavy bomber squadrons for the rest of the war. There was much evidence of the Canadian period in the memorial room. From 1945 to 1946 Linton was a Transport Command base heavily involved with repatriation of prisoners-of-war; in 1946 it was transferred to Fighter Command and operated Hornets, Meteors, Sabres and Hunters until 1957 when 1 FTS moved in.

We had an excellent lunch in the company of many of 72(R)'s instructors. The Officers' Mess is still operated by RAF catering staff, and one cannot help but notice that this enhances service standards and atmosphere.

On then to the Simulator Facility: built by Ferranti in the early 90’s, the sims clearly lag current technology, and an upgrade for the visuals is sought. It is now operated by Thales and all 8 instructors are ex A2 cat on the Tucano. Students endure or enjoy 36 sim hours during their course. Each company member was treated to a 30 minute session. Some found entry and egress from the Tucano cockpit a little difficult but all enjoyed the stick time. The party piece at Linton is to attempt to fly the Tucano under the Humber Bridge - I am sure it is even more exhilarating in the real thing!

The Station Commander was very generous with his time, and in the concluding session he reiterated the high quality of the students in his care. To the surprise of many Company members with memories of the review system, no student had failed to receive his wings since he had arrived. In consequence all those in the current pipeline are judged capable of becoming a fast jet pilot.

The Master gave a heartfelt vote of thanks and we left Linton by car and aircraft after a most stimulating and enjoyable day.
When it was first suggested by someone on the Events/Visits Committee in 2012 that there should be more visits further afield than just within the Home Counties of London, there was immediate enthusiasm for organising a technical visit to Switzerland and the Pilatus Aircraft Ltd factory at Stans Buochs. It had been hoped to visit Pilatus in 2013 but the Paris Air Show clashed with our favoured dates and so a 12-month postponement meant that the visit took place in June this year. There were 14 Air Pilots - some with their wives - and 3 guests who gathered at hotels in Hergiswil and nearby Luzern for the visit to Stans on Friday 20th June. A few of the Air Pilots were overseas members resident in Switzerland, and Freeman Dr Thomas Syburra flew into Stan's airfield with his guest from Scion in their Robin 200. Other members who had hoped to fly to the Pilatus factory wisely re-considered because of the mountainous terrain with relatively high difficulty factor for the visual approach to Stans airfield. Some members living not far away in France travelled by road, but the main party travelled from the UK by easyJet and train. The Master made a 24 hour “flying visit” to lead the Air Pilots group from the front. Regrettably the Master's busy schedule did not permit her to stay for the post visit dinner on Mt Stans and the Pilatus Aircraft Ltd. The Pilatus is of course also noted for its success in the production of training aircraft. Currently in production are the PC-7 Mk II, the PC-9 and the PC-21. So far more than 600 PC-7 family aircraft have been sold to 22 air forces, including 75 to the Indian air force of which half have been delivered. More than 260 PC-9s have been sold to 15 air forces. 131 PC-21s have been sold so far, and the company sells this aeroplane as a ‘flying simulator’, with embedded simulation and emulation of fighter systems. A brave new venture for Pilatus is its entry into the business jet market with the clean-sheet design PC-24, in which it is investing SFr400 million. Announced in 2013 it is at a very advanced stage of development, but sadly the Air Pilots were not permitted to see the aircraft which was locked away in total secrecy being readied for the Roll-Out ceremony that will take place on Swiss National Day 1st August. Pilatus is calling the PC-24 the world’s first Super Versatile Jet because of its capability to operate like the PC-6 and PC-12 from unpaved surfaces. Powered by 2 Williams FJ44-4A engines each producing 3,400lbf thrust, it is predicted to fly at 45,000ft with balanced field length of 820m and a max cruise speed of 421kts.

The world's leading STOL aircraft has to be the iconic Pilatus Porter PC-6 that has become a legendary aircraft known simply as the 'Porter'. Still being built after more than 50 years the Porter is capable of operating from rough fields, short airstrips and with skis fitted off snow. The first PC-6, built in 1959, is still operational in France. Of about 600 built so far, about half remain in service. The Air Pilots were able to view the Porter in the hangar at Stans where aircraft are also refurbished and maintained as well as being assembled in the final stages before painting. Pilatus's most successful aircraft to date is the versatile PC-12, probably the most popular turbine-powered business aircraft today. Pilatus operates a number of service centres around the world in support of the more than 1,200 PC-12s flying in either the business executive transport role or as air cargo, air ambulance - 30 are operated by the Royal Flying Doctor Service of Australia - or government special missions operations. Seventy percent of the PC-12 fleet operates in North America. The large cargo door on the PC-12 was very impressive and we were impressed by the precision Swiss engineering that went into the manufacture of the aircraft.

Pilatus is a very proud company that started aircraft production in 1939 following the outbreak of WWII because Switzerland recognised that it might not be able to rely upon other European countries for its own aircraft needs. In recent decades it has established itself as a company that produces high quality aircraft that fit specialised operational requirements for flight in difficult terrain, and from semi-prepared airfields. Markus Kälin, Executive Assistant to the Chairman and our host for the day, proudly explained in his welcoming brief on the company how Pilatus had evolved into the successful organisation that it is today. He explained that the company re-invests in itself and has no borrowed money and is therefore not reliant upon outside finance to maintain its strength. The company also invests in people and has a very strong apprenticeship programme employing 101 apprentices in ten different disciplines.

Heavy hint that times up - all the valleys fog-bound

Hosts and visitors

Immaculate flight deck of a new PC-12
of 425kTAS. With a range of 1,950nm carrying 800lb of payload it should be a formidable competitor in the business jet market. Markus Kälin was proud to announce that at the European Business Aviation Conference and Exhibition in Geneva in May, they were overwhelmed with orders for the PC-24, and the jet is now sold out through to 2019 with 84 non-refundable deposits received.

We began our tour of the factory in the magnificent main assembly hall with its timber roof, the largest such structure in Switzerland, where we saw examples of the PC-12, PC-7, PC-9 and PC-21 aircraft complete or close to completion. Our tour then continued with our two guides, Benny Waser and Joseph Joller, to other production departments. PC-12 wing and fuselage construction, from kits produced at Stans, is outsourced to the Czech Republic, Poland and Portugal: this is necessary because of Switzerland's uncompetitive exchange rate which makes Swiss labour too expensive in US Dollar terms. Airframe fit-out is at Stans, and our tour included PC-12 and trainer production facilities as well as machine shops where parts are fabricated and the paint shop. Parts production techniques range from the traditional to the latest CNC processes and composites, and it was interesting to see the extensive marking of individual small components to ensure traceability.

After an enjoyable lunch in the canteen we walked to the simulator centre which is on a separate Pilatus site. Here we split into groups to experience the PC-12 simulator with Pilatus test pilot Paul Mulcahy (who is involved in the PC-24 programme) and John Greenway, and the PC-21 simulator with ex-RAF instructor Rennison Carter. It proved difficult to curb our enthusiasm for the simulators, and despite the session being extended by an hour the last man out of the PC-21 needed the encouragement of all the airfields below him becoming fog-bound!

In the evening we were able to entertain our host Markus to a splendid typical Swiss meal at the Restaurant Alpgschwänd which is located half-way up the side of Mt Pilatus and was reached by cable car. The food and wine were all Swiss and absolutely magnificent with a breath-taking view from the Restaurant of Lake Luzern, Hergiswil and of course Stans Buochs with the Pilatus factory around the other side of the mountain ridge. It was a fantastic evening that rounded off a splendid visit in style and provided memories of the day's experience that will remain for a long time to come in the minds of those Air Pilots who made the trip.
A Flying Adventure in Florida
ASSISTANT PROFESSOR DIANA GREEN

As I approach 1000 hours achievement as a PPL… and having reached the advanced age of 70 years… I have started to look for new flying challenges. This article describes how a flying holiday in Florida provided the opportunity to fly two “Old Timers”… a Ford Tri-motor and a Texan 6 (Harvard) in formation with a P51(Mustang) and try my hand at floatplane flying in a Piper Cub.

I have for many years wanted to fly in the United States. During a visit to The Festival of Speed at Goodwood in the summer of 2012, my husband, John, and I met RAF Tutor Instructor Ollie Fisher, who runs a company with his father, Stephen, called “Pilots Paradise”. The company, based at Vero Beach in South East Florida, provides flying holidays. The holiday packages are based around the hire of an aircraft (a PA 28 Warrior), various accommodation options, assistance with US Licencing, and a FAA Bi-annual check ride which doubles to help familiarisation with the US ATC system. The accommodation options, of which there are several, include an apartment on an airpark…basically a grass strip surrounded by houses with individual hangars backing directly onto the strip. We chose this, and enjoyed the experience of having our aircraft parked outside the door … and Stephen lives next door and keeps an eye on clients…Some more timid people might feel less challenged if they parked the aircraft at nearby Vero Beach!

We booked two weeks holiday with 20 hours flying, to be taken at the end of February/early March 2014…to escape the half term holidays in France. We took advantage of good weather to fly extensively in south and east Florida, visiting airfields of different types (they are almost all enormous in size!) … from those where there is no Air Traffic control to those like Ft Lauderdale Exec where we mixed with the big jets. We visited the aircraft museum at Titusville…like Duxford, but the military “Old Timers” are donated on the understanding they are flown regularly and Kissimmee. We even took the Warrior for a weekend in Nassau, in the Bahamas. A challenge to describe on another occasion!

Once we had got used to the US air traffic control conventions, we decided they are both simpler and more logical than their UK counterparts…although you do have to be prepared to communicate your intentions very precisely, even where there is no Tower, and when the tower is manned at larger airports to be ready to absorb lengthy and comprehensive (often rapid!!) taxi instructions. Landings are free absolutely everywhere…and fuel costs about $45/hour!

The Ford Tri Motor: “The Tin Goose”

Our nearest airfield was Vero Beach, which is also the base of the Piper Aircraft construction company. On visiting the airfield, we discovered that the historic 1927 Ford Tri-Motor, owned by the Experimental Aircraft Association (EAA) was giving tourist rides that weekend. I signed up for a flight the next day, and paid extra for the co-pilot’s seat.

Having boarded NC8407, with eight other passengers, I engaged the pilot (Neil) in conversation about the aircraft, and mentioned that I was a pilot. He promptly asked if I would like to fly it! After quick instructions, especially in respect of the brakes (he had control of the hand operated “Johnny Brake”), he handed over the flying controls to me. I flew the aircraft down the coast for ten minutes, turned and flew back to the airfield, then handed back the controls for the landing. The other passengers were blissfully unaware that the aircraft was in the hands of an English PPL!

NC8407 is a restored 1929 Ford 4-AT-E Tri-Motor, painted in the colours of Eastern Air Transport. It is a very odd looking aircraft, constructed of corrugated aluminum alloy… which gives strength but reduces its performance. Unlike many other aircraft of this vintage, the control surfaces are not fabric covered but also made of corrugated metal. It is very heavy to handle! Cruising speed for this trip was 60mph!

The aircraft was first designed by William Bushell Stout an engineer who had designed several aircraft similar to the designs of the German aircraft engineer, Hugo Junkers. In 1925, Henry Ford bought the Stout Metal Airplane Company and the aircraft design (Stout 3-AT) which had 3 Curtiss-Wright air cooled radial engines. The prototype was built and flight -tested with poor results… and a suspicious fire destroyed all the designs. This led to the development of the 4-AT and 5-AT versions. The Ford Tri-Motor resembled the Fokker F-V11 Tri-Motor but its all-metal construction led Ford to claim it was “the safest airplane around”!

The original 4-AT (like this one) had three air-cooled Wright radial engines (the later 5-AT had more powerful Pratt & Witney engines) and carried a crew of 3 (including a stewardess) and 8-9 passengers. 199 were built and used all over the world before production ceased in 1933. It led to construction of the first airborne terminal for passengers and was the first regularly scheduled passenger airliner to operate. It prompted the construction of the first paved runway and was the first airplane that led to required crew training. The one I flew is one of only two in the US.

I felt very privileged to be given the chance to handle this very precious historic aircraft.

Formation Flying in the Texan 6

A few days later, we flew to Kissimmee, one of the Gateway airports to Orlando and home of the Kissimmee Air Museum and Flights Company which has a number of “Old Timers” and offers “Warbird Adventures” in two Texan-6s. I had also read that they had recently got access to a P51 Mustang. I signed up for a flight in one of the Texans, to include aerobatics. I was then offered an opportunity to delay my flight for an hour in order to fly in formation with the other Texan… and to link up in a three ship formation with the P51. What an opportunity!

The Texan first appeared in 1937 in response to the US Air Corps proposal for
an advanced trainer. It was used to train pilots in the US Army Air Force, US Navy, the RAF and other air forces worldwide until the 1970s. Designed by North American Aviation (NAA), after 1962, the Americans designated it the T6 and it became known as a Harvard in the UK. It has a Pratt & Whitney R1340-AN-1 Wasp 600hp radial engine and a maximum speed of 208mph at 5000ft with a cruising speed of 145mph.

A total of 20,110 of all variants were built between 1938 and 1954. The one I flew, N451WA, was badged as a US Navy ship. The P51 Mustang is the best and most well-known long-range single seat fighter and fighter bomber used during World War 2 and in Korea. The aircraft was also designed by North American Aviation (NAA) and first flew in October 1940. It was originally designed to use the Allison V1710 engine which had limited altitude performance. The B and C models were fitted with Rolls Royce Merlin engines which transformed performance above 15000ft. The definitive version was powered by a 1,695hp Packard V-1650-7—a licence built version of the Rolls Royce Merlin 60. The P51s maximum speed is 437mph and it has a service ceiling of 41,900ft.

For my Warbird Experience, the two Texans took off individually so that each student pilot could get some handling experience with the instructor, including aerobatics. After about 20 mins of this, the two Texans joined up and flew in formation to search for the Mustang…When the three ships joined up, we flew in formation for about 10-15 mins. We then separated and the two Texans returned in formation to the Kissimmee base. Cameras in the aircraft meant that the whole experience was captured in still photos and a DVD. I exited N451WA with a big grin on my face!

**The Seaplane experience**

My third adventure was to fly a Piper Cub on floats at Jack Brown's Seaplane Base at Winter Haven, in central Florida, just south of Orlando. The company, founded in 1963 by Jack Brown, provides training for a single engine seaplane rating. The full course takes two full days and takes advantage of Florida being the “Land of 1000 Lakes”.

The aircraft used is a Piper J3s on floats with a Continental 100 hp engine. This was not my first experience of a floatplane. In 2005, I went to Loch Earn in Scotland with the BWPA (British Women's Pilots Association) which had organised two separate groups to do a weekend's float plane flying. Unfortunately, adverse weather meant I had only 20 minutes on that occasion, with one take-off and one landing.

At Jack Brown's, husband John (for whom this was a first experience) and I each had a separate one hour's session of dual instruction. This included basic water handling, including idle, plough and step taxi procedures and normal and glassy water operations. In all, this involved 10 take offs and landings on several different lakes, ably assisted by a young, enthusiastic instructor called Tracy. The experience of flying with the side of the Cub open to the elements, landing from a 300ft “pattern” above houses around the lakes and mixing it on the lakes with motor boats and other craft was exciting…but quite a challenge! It has certainly given me an appetite to do the whole 5 hours dual instruction course to get the rating…if we return to Florida next year.

Flying in Florida, in a single engine Piper was itself a learning experience not to be missed. We both feel strongly that European aviation authorities would do well to look at the relative simplicity of the US model. Adding into the holiday the opportunity to fly two historic aircraft … and try my hand at floatplane flying may have put up the costs of the holiday…but provided benefits in respect of stretching my flying capabilities and experience which I will never forget.
THE HONOURABLE COMPANY OF AIR PILOTS
ROYAL CHARTER

By the Grace of God of the United Kingdom of Great Britain and Northern Ireland and of Our other Realms and Territories Queen, Head of the Commonwealth, Defender of the Faiths:

TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETING!

WHEREAS the unincorporated organisation commonly known as the Guild of Air Pilots and Air Navigators (hereinafter referred to as the former Company) petitioned Us for a Charter of Incorporation, and
WHEREAS We have taken the said Petition into Our Royal Consideration and are minded to accede thereunto,
NOW THEREFORE KNOW YE that We, by virtue of Our Royal prerogative in that behalf and of all other powers enabling Us to do
as in Our Discretion, with certain knowledge, and more positively, do hereby for Us, Our Heirs and Successors grant, assent, appoint and declare as follows:

The Honourable Company of Air-Pilots

107 The present new members of the said organisation and all such persons as may hereafter become members of the body corporate hereby constituted pursuant to or by virtue of the powers granted by these Presents and their successors for ever hereafter (so long as they shall continue to be such members) shall be by virtue of these Presents the body corporate by the name of the Honourable Company of Air Pilots (hereinafter referred to as the Company) and by the same name shall and may sue and be sued in all and any Court of law, and in all manner of actions and suits, and shall have power to do all other matters and things incidental or appertaining to a body corporate.

The Arms and Crest granted and assigned unto the former Company by Letters Patent under the hand and Seals of Quarter, Clarenceux and Norroy and Ulster Kings of Arms bearing the date 28 September 1952 shall be transferred unto the Company on the date on which this Charter shall take effect, and We do hereby give and grant unto the Company Our Royal Licence and Authority that it may thenceforth bear, and use the said Armourial Bearings according to the Laws of Arms, the said transfer being first recorded on Our College of Arms, otherwise this Our Licence and Permission to be void and of no effect.

Photo courtesy of Mrs Ruth Candy