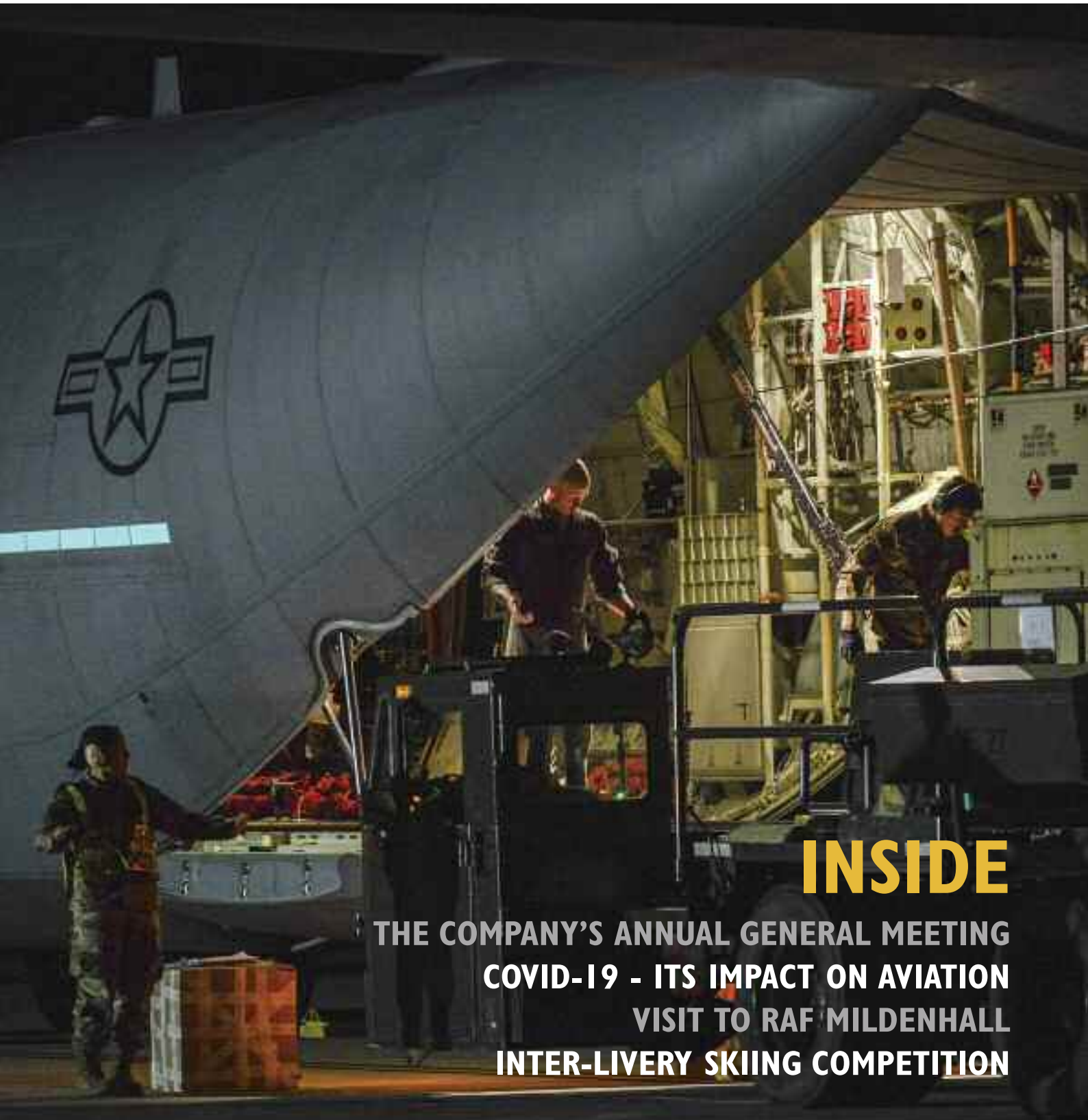


APRIL 2020 ISSUE 38



AIR PILOT



INSIDE

THE COMPANY'S ANNUAL GENERAL MEETING
COVID-19 - ITS IMPACT ON AVIATION
VISIT TO RAF MILDENHALL
INTER-LIVERY SKIING COMPETITION



THE HONOURABLE COMPANY OF AIR PILOTS

incorporating Air Navigators

PATRON:

His Royal Highness
The Prince Philip
Duke of Edinburgh KG KT

GRAND MASTER:

His Royal Highness
The Prince Andrew
Duke of York KG GCVO

MASTER:

Captain John P Towell FRAeS

CLERK:

Paul J Tacon BA FCIS

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A Livery Company of the City of London.

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Except where specifically stated, none of the material in this issue is
to be taken as expressing the opinion of the Court of the Com-
pany.

DIARY



All physical events have been postponed until further notice. Some meetings will take place through video-conferencing. For the latest situation please visit the calendar page of the Company's website:

<https://www.airpilots.org/members-pages/company-calendar/>

Cover photo: A C-130J Super Hercules stationed at Ramstein in Germany delivers pallets of medical equipment to Aviano, Italy, on March 20. (U.S. Air Force photo by Tech. Sgt. Rebecca Woodrow)

A MESSAGE FROM YOUR EDITOR...

If Tim Berners-Lee's invention of the World Wide Web enabled the connection of populations around the world in a virtual sense, then it is aviation that has connected the globe in a physical sense. It is thus an unwitting architect of its own grave misfortunes. The epicentre of Covid-19 in Europe is Italy. There are demographic reasons why this should be so: high incidence of old men, many of whom were or are heavy smokers, and therefore with poor respiratory performance; lots of multi-generational living. But apparently the textile and leather industries of Northern Italy employ many Chinese workers. When they flew back to Italy after celebrating Chinese New Year, the virus really kicked off. An Asian influx for the Milan Fashion Week and the Venice Carnival fanned the flames. Commercial Air Transport (CAT) has carried the virus around the world.

As CAT has hit the buffers, so pleas for state aid around the world have been deafening. In the UK they will carry slightly less weight than otherwise as the usual sources were shouting for government



intervention only a few weeks ago to save Flybe. In my opinion the UK Government was right to ignore that particular cry – the company had been denuded by its owners, and was inherently unprofitable prior to the Covid-19 outbreak. Clearly governments will have to make harsh decisions about which airlines to bolster. Aviation businesses that have grown from ownership structures designed to minimise payment of taxes to the UK exchequer deserve to be at the back of the queue.

Few governments will currently be thinking that their militaries are too large. Russian activity outside our waters, both under the water and in the air, remains high. The disinformation campaigns by China and Russia sickeningly seeking to exploit the crisis for national benefit, indicate that Western forces should remain focused.

So military aviation remains at a high tempo. Whilst NATO exercises have been cancelled, France, for example, has already begun to use her A330 MRTT for medevac flights transferring patients to hospitals with lower workloads. The UK's AT fleet is already similarly employed. I understand our friends in the RAF's Puma Force have begun to prepare for medevac and medical freight transport duties between UK hospitals.

Our Company is acutely aware of the disruption to, or evaporation of, the careers of flight crew, and the back page reaffirms our stance to proffer our varied mentoring skills, where this is needed. There will be a sharp upsurge in flight crew suffering financial anxiety. If you hear of cases of hardship do point them towards our Benevolent Fund.

We all know that gaining an ATPL these days requires intensive training and leaves the fledgling commercial pilot with an albatross of debt. However there is another profession that requires students to train for longer before they gain salary-earning employment – that is medicine. I venture to suggest that most countries will prize their bank of doctors more highly than that of pilots at present.

Aircraft can turn to port, or starboard; they fly circuits; pilots fly holds, SIDs and STARs. They do not always fly in a straight line. Yet the aviation industry has until very recently rather assumed that growth would continue in a straight line.

In the last year, increasing concern about climate change threatened to derail this assumption. However the onset of Coronavirus has upended the industry to a degree incomprehensible to all save, perhaps, Nostradamus. Further, I would wager that in the aftermath of the crisis, the world's population will be more nervous of climate change, not less. I would err on the side of suggesting that China's gift to the rest of the world will mean aviation will be profoundly changed for a very long time.

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NEWS ROUND UP

LUNCHEON CLUB

The Luncheon Club met at the RAF Club on January 28th. Our speaker was Wg Cdr Tony Davies who gave a talk on Aerobatic Teams Worldwide. This started with heavy emphasis on the CFS team, the Red Pelicans, of which Tony had been a member, and Liveryman John Robinson had been his team leader. We were tantalised with tales of the annual Red Pelicans reunion due to be held in May in Alderney, when Liveryman John Davy would also be present. The talk had elements of an aircraft recognition test with a plethora of slides of foreign aerobatic teams through the last four decades.

NAO REPORT ON MOD EQUIPMENT PLAN

If you need cheering up, please don't read this. It was published by the National Audit Office on 27 February, and therefore does not take into account the massive budgetary pressures which will follow on from tackling Covid-19.

<https://www.nao.org.uk/wp-content/uploads/2020/02/The-Equipment-Plan-2019-to-2029-Summary.pdf>

ANDY BROOKES AT RAFM

Liveryman Wg Cdr Andy Brookes gave a lecture at the RAF Museum on 17 January under Vulcan XL318 - the first Vulcan he ever flew. He covered the history of the design of the Avro Vulcan, its employment and crewing, the weapons carried, how the V-Force would have gone to war, and an assessment of overall effectiveness.



RAF BENSON SUCCESS AT MILLIES

The Joint Helicopter Support Squadron at our associated unit, RAF Benson, was recognised for its work on UK disaster relief (the Whaley Bridge dam episode) at the Sun's Millies awards in February. Below the Station Commander, Gp Capt Adam Wardrope, is shown congratulating squadron members.



UK AERODROMES UPDATE

Continues to be depressing. The GAAC have issued an update here:

<https://www.gaac.org.uk/wp-content/uploads/2020/01/AERODROMES-UPDATE-Jan-2020.pdf>

This covers the following airfields: Andrewsfield, Bourn, Cambridge, Chalgrove, Deenethorpe, Dunsfold, Elvington, Fair Oaks, Wolverhampton, Hullavington, Langar, Long Marston, Manston, Abingdon, Alconbury, Brawdy, Colerne, Dishforth, Halton, Henlow, Linton, Mildenhall, Nth Luffenham, Scampton, Spitalgate, Swanton Morley, Ternhill, Wethersfield, Wyton, Nth Denes, Nottingham, Old Sarum, Panshangar, Sibson, Plymouth, Redhill, Gamston, Wellesbourne, Wycombe.

HEATHROW

In February the UK's High Court ruled that Heathrow expansion (in the form of a third runway) was illegal, as it did not take into account the Paris climate agreement of 2016. It is also worth noting that Heathrow's owners, FGP Topco Ltd – a consortium headed by Ferrovial – has paid itself £4bn in dividends since its formation in 2006. Its net debt at December 2018 (the last available accounts) was £16bn. This is well above the CAA's notional level. Given its deliberately Spartan balance sheet one hopes that it does not come to the UK Government with a begging bowl. It is difficult to see how current airport charges of £22.64 per passenger can be sustained.

BALPA has urged the Government to do all it can to get airport expansion plans back on track. "While we understand the challenge that the aviation industry faces when it comes to climate change, we also want it recognised that aviation makes a vital contribution to the UK economy. Without expansion, at Heathrow and in the rest of the UK, we will see further congestion, stagnation in the sector and will struggle to keep pace with global competitors."

FLYBE

Flybe entered administration on 5 March, with the loss of 2,400 jobs. It was acquired by the Connect consortium, comprising Virgin Atlantic, Stobart Group and Cyrus Capital (a venture capital fund) in early 2019. It was loss-making when they acquired it, after months of separate approaches, during which time its financial performance deteriorated.

Stobart injected its small airline and leasing group – at an inflated price (described as "outrageous" in the Times). Virgin secured nine pairs of Heathrow slots, and switched the Newquay service to Gatwick (subsidised by the taxpayer). All three owners tried to secure all of Flybe's valuable assets, and then sought a £100m bail-out from the UK Government in January this year. Commentators have pointed out this is somewhat counter to Sir Richard's Branson's stance on help for BA a few years back. The 1,300 members of the Flybe pension scheme will be further disgruntled by the lack of cover from the UK pensions lifeboat, since their scheme is based in the Isle of Man.

PURSUIT OF EXCELLENCE IN VOCATIONAL EDUCATION AND TRAINING WITHIN THE LIVERY MOVEMENT

Past Master Roger Gault writes:

At a ceremony in the Mansion House on Monday, 2 March, the Lord Mayor, Alderman William Russell, presented 10 City and Guilds of London Institute Prizes to recognise outstanding learner and tutor achievements, 11 Certificates to recognise achievement at Apprentice level, 10 Certificates to recognise achievement at Journeyman level and 23 Certificates to recognise achievement at Master level. The event was hosted jointly between the Livery Companies Skills Council, Construction Liveries Group and City and Guilds of London Institute. Masters from 15 Livery Companies and both Sheriffs attended the event. Past Master Group Captain Roger Gault, in his capacity as Vice-Chairman of the Livery Companies Skills Council, assisted in hosting the event and gave the closing address.

EVENTS

As you are probably aware, both Farnborough and RIAT have now been cancelled this year.

AND FINALLY

For those self-isolating, the Editor has identified the perfect new toy – the Metafly. This French-designed baby is an ornithopter drone with seemingly indestructible carbon fibre wings. It requires calm winds outdoors, or a reasonably large room indoors, and looks an ideal addition to the toybox of Company members of all ages.

See <https://bionicbird.com/world/>



INTER-LIVERY PANCAKE RACES

On Shrove Tuesday, about 40 Livery Company teams gathered in Guildhall Yard for the annual inter-livery 'Pancake Races', organised by the Poulterns' Company. As can be seen from the accompanying photo(s) – also available on our Facebook page – this event is now very popular and draws a large crowd of spectators. Where else in the world could you visit the centre of the Central Business District of the capital city and see individuals running around in fancy-dress costumes, tossing pancakes? Each team consisted of 4 runners: the Master, a Liveryman, a Lady, and a 'novelty' entrant dressed to represent either the Lord Mayor's charity or their Company. In our team, those assisting the Master were Vanessa – as our 'novelty' entrant, Liveryman Richie Piper and Eloise Cummins (representing the secretariat) as the Lady entrant. The competition in each category and each heat was fierce and our team had its work cut out in the face of tough competition.

And didn't they do well...!?! Vanessa received a 'Special Mention' from the judges (Chief Commoner and Sheriffs) for her appearance as a pilot in her own representation of a Spitfire. Eloise managed to make the finals of the Ladies' races – although didn't achieve her second 'frying-pan' prize trophy (she won one in 2018). Both the Master and Richie Piper achieved impressive times in their respective heats although didn't quite manage the finals. Maybe next year ...

The object of the day is to raise money for the Lord Mayor's charity, with each Company paying an entry fee for its team. The precise amount raised is not yet known although I'm sure the Poulterns will have achieved a not inconsiderable sum.

A successful day all-round, and hopefully we'll achieve even greater success next year.



Our now Past Master, with our now Newest Warden

MASTER'S MESSAGE

Captain John Towell

The Court of the Air Pilots has a cycle of regeneration with a new Master, Master Elect, Warden and Court Assistants elected every year. At the Court meeting on 23rd January I was honoured to be elected to be the new Master from the installation on 16th March. It is a great privilege to serve the Honourable Company of Air Pilots as Master; I am humbled and excited by the prospects for the year ahead. I look forward to working with the whole Court as we serve the Air Pilots to the best of our ability. It is a pleasure to express on behalf of the whole company a vote of heartfelt thanks to Immediate Past Master Malcolm White and Vanessa for the wonderful way that they have represented the Air Pilots over the past year. They have been great ambassadors for the company and are a hard act to follow.

Without 20/20 foresight we do not know what opportunities and challenges this year will bring. What is certain is that we can be proud to belong to a vibrant company with great traditions, and which is in good health. It is an honour and privilege to serve as the Master of the Air Pilots - Linda and I shall do our best to support our company, root and branch.

For centuries London livery companies have supported the training and development of young people entering their trade or profession, the maintenance of high standards, and benevolence for those in need. Air Pilots are active in supporting these objectives and we are proud of our heritage dating from the formation of GAPAN in 1929 through the years of gradual evolution into the impressive Honourable Company of today. The Air Pilots is not a business, and it relies on the membership to convey and promote the company values of Integrity, Excellence, Independence, Benevolence and Charity. I will talk about our new benevolence appeal in a later Master's message.

Whilst Air Pilots is a well respected company we have the potential to be even more effective. Creating meaningful change in a livery company can take three or more years and I am pleased that the Wardens and Clerk share common aims and ambitions that can be supported over the next few years. Opening up opportunities to become airline pilots for those with the passion and aptitude for flying, but without serious financial support, is a very important objective. Another objective is to help younger members develop skills, knowledge, and understanding so they are well equipped for aviation careers. There are several ways in which we can make a real difference for

younger members, and in this message I will highlight apprenticeships and mentoring.

Past Master Roger Gault has worked hard over recent years to bring training organisations, government departments, and airlines together to help develop apprenticeship schemes for pilots. An apprenticeship scheme to train First Officers, which benefits from government financial incentives, is tantalisingly close to fruition, and several airlines are showing real interest. The final hurdle is getting the right financial package agreed by government. We shall do our utmost to help influence the debate.

We have a mentoring scheme, and there is great potential to make it more relevant to younger members. Recruiting and training scholarship winners and other young members into the scheme to pass on knowledge and experience to those following them makes sense. An example of how quickly new-found knowledge and experiences can be passed on is the Air Pilots Gliding Scholarship winner who, just a few years later, was the duty pilot at Dunstable responsible for safety and helping others. A first officer recently established in an airline is in a great position to help and advise those who aspire to follow, and we will encourage and support this process. Experienced Captains can mentor First Officers developing command skills and experience. Within our company we have many excellent role models, much experience and wisdom which could help others. We will set out to recruit more mentors with a range of ages and experiences.

*An Old Warden treasure
(photo by the Editor)*



Volunteering is a rewarding and important part of being a member of a Livery company. As well as mentoring you might consider helping with the visits team, the flying club, golf society, or perhaps share experiences with school or air cadet groups. Passing on interviewing skills, a generic life skill, is so rewarding for both parties when the trainee is successful at interview. The technical committee and aviation careers and education committee can use help and as the company routinely uses remote working you can contribute from anywhere. It seems only a few years ago that I first volunteered to help with the schools gliding programme, and that was the start of a fascinating journey for me within the Air Pilots and the City of London.

During the year we shall be able to get more insight into the fast developing world of electric-powered aircraft as well as more knowledge about space as Britain positions itself as a nation promoting space launch facilities in Cornwall and Scotland.

The Cobham lecture "Towards zero-carbon flight and the fastest electric-powered aircraft" in the RAF Club on April 22nd will be given by Chris Hadlow, Chief Pilot of Rolls Royce, and Matheu Parr the senior program manager. Rolls Royce is aiming to break the world speed record for all-electric aircraft in late spring this year with a target speed of 300+mph, so the Cobham lecture (Editor's note: if it takes place) is timely and should be fascinating.

This year could see British pilots flying both Virgin Galactic inaugural flights into space, and Virgin Orbit Boeing 747 flights operating from Spaceport Cornwall (Newquay) launching satellites into orbit. In March IPM Malcolm White presented Tim Peake with the Master's Medal awarded in 2016. The visits team have organised a company visit with a guided tour of the award-winning National Space Centre in Leicester on 14th September. If you have a particular interest in space please contact the DAA, daa@airpilots.org.uk, as it will be useful to identify company members with space interest.

I have chosen the Jon Egging Trust (JET) as my Master's Charity. I met Jon during the GAPAN visit to the Red Arrows in 2011, and sadly he was killed at the Bournemouth Air Show later that year. Emma Egging, his widow, has been inspirational in leading the development of JET which helps young people across the UK, many of whom were struggling at school or at risk of dropping out of education. In the last year hundreds of these young people discovered an inner strength, confidence and determination they had never thought possible. Many dared to step out of their comfort zone for the very first time, or gained a new perspective on their self-worth and what they can achieve in life

The JET Annual Dinner for 2020 will be held on the 15th

May* at RAF Coningsby hosted by Patrons Professor Brian Cox, Air Marshal Sir Stuart Atha, and Air Vice-Marshal Harv Smyth. Emma Egging has invited a group from the Air Pilots to attend the dinner. Linda and I will be there and if you would like to join us please let me know asap, jptmoth@gmail.com tickets are £120. We'll be celebrating heroes past, present and future underneath the wings of epic WWI and WWII planes, and their 21st century successor – the stunning Eurofighter Typhoon.

The Master's Garden Party will be held at Old Warden on Friday 21st August with lunch served in the Garden Suite of Shuttleworth House. There will be plenty of flying action with Tiger Moths and other vintage aircraft taking part in the DH Moth Club charity flying day. As well as entry to the airfield and the Swiss Garden, we can also visit the world class Shuttleworth Collection of vintage aircraft and vehicles, so there should be plenty to suit all tastes. I am very grateful to Stuart McKay of the DH Moth Club and Rebecca Dalley, Executive Director of the Shuttleworth Trust, who have made this possible. Flying in to Old Warden is available with PPR. Plan to bring your family and friends, children welcome.

The annual DH Moth club charity flying day at Old Warden inspires and educates young people about aviation. Students from local schools experience a twenty minute flight in a vintage aircraft routing past the giant airship hangars at Cardington. The aircraft are flown by volunteers and members of the public (no doubt including garden party guests) can pay for a flight in a choice of vintage aircraft - helping to cover some of the costs of the charity flights. In recent years the choice of aircraft has included Tiger Moth, Hornet Moth, Moth Major, Chipmunk, Miles Messenger, DH Dragon and Dragon Rapide.

*This date is to be changed

*DH loveliness
(photo by The Editor)*



A PROFILE OF OUR NEW MASTER CAPTAIN JOHN TOWELL

By the Editor

In June 1958 the redeveloped and extended Gatwick was officially opened by Her Majesty the Queen and local schools were bussed in for the occasion. John and his primary school classmates excitedly watched the de Havilland Heron of the Queen's Flight arrive with the Royal Party. As he grew older Gatwick became a significant attraction within easy cycling range. Aircraft recognition and spotting with a group of friends became a keen interest. The exciting buzz of international travel within the terminal building along with the action around the aircraft might have planted the dream of flying.

Model aircraft were another factor in stimulating an interest in aviation. A Christmas present of a Keil Kraft balsa wood model glider kit led to struggles with fragile tissue paper covering, cut fingers from broken razor blades, and the distinctive aroma of cellulose dope. When the completed model flew rather well John was hooked on the excitement of flying. More complex control line aircraft with diesel engines giving off the heady smell of ether followed. Larger radio control aircraft later taught more lessons on aircraft operation and control.

At the time the Tiger Club was perhaps the most unique flying club in the world, and its base at Redhill was also within cycling range. John spent many happy hours watching the flying which was sometimes incredible. A special memory is of Neil Williams putting on a stunning impromptu show in a Spitfire.

When at Reigate Grammar School John joined the RAF section of the CCF, and flew for the first time in a Chipmunk from White Waltham. Summer camps were always popular, especially the visit to RAF Laarbruch in 1968 when the cadets flew out on a British United Airways BAC 1-11 with rearward facing seats in MOD trooping configuration. Looking back the CCF cadets were helped

significantly by the school masters who gave so much of their time and energy to training and mentoring. John was awarded an RAF Flying Scholarship and was thrilled to be given the opportunity to learn to fly, something he had thought was way beyond his means. He was proud of his PPL awarded at 17 years of age, before he gained a licence to drive a car.

After A levels John was fortunate to be offered two different pilot career options – to either join the RAF on a university bursary, or to train to be a commercial pilot. He decided to accept the offer from the College of Air Training in Hamble, which had been set up with government support to provide pilots for the national flag carriers. Cadets who did not get “chopped” joined either BOAC or BEA, and paid back part of the cost of training over five years. Part way through his course a bomb shell was dropped when the whole college was assembled to be told that BOAC had too many pilots, and would not be recruiting for several years. The speaker claimed that they now had an improved planning model which would prevent similar peaks and troughs of demand for pilots in the future! BEA would still be recruiting pilots, but there was much uncertainty as they would be taking on far more than originally planned.

After graduating from Hamble, John was awarded a BEA pilot contract as Second Officer. He was enthused to have a job, a salary and uniform (albeit with single ring rank marking). Such new entrant pilots were redeployed to

various other parts of the airline whilst waiting to be allocated a type conversion course. John found himself working in the navigation services department in BEAline House (known as TeaTime house), the BEA HQ in Ruislip. The job was to create and update PLOGS (pilot navigation logs), where one sheet of A4 paper had all the information required to get from departure to destination. The



Masterful with Trident at Prestwick

*Reigate Grammar School CCF at RAF Laarbruch in 1968
(JT 2nd from left in back row)*





Caledonian Tristar Preveza 1995



Hamble Course 704B (JT front row 5th from left)



1st test flight

redeployed pilots escaped from the office to experience routine operations by joining flight crews on Vanguards and Tridents. After several months John was posted to Gatwick to work in navigation services at BEA Airtours, which was then introducing ex BOAC B707s for long haul operations alongside the shorter range ex- BEA Comet 4Bs.

After six months of this holding John was posted to the Trident 1 & 2 fleet; he completed the chalk and talk ground school course at the BEA training centre in Heston. The simulator visuals were generated by a camera which tracked above a large model of the area surrounding the airport. After the simulator it was off to Prestwick for base training, and a large group of cadets and the trainers were accommodated in the Caledonian Hotel in Ayr. In the early hours of one morning John was woken by the smell of smoke which he momentarily thought was burning toast before noticing the orange glow at the window. On opening the curtains there was obviously a major fire and immediate evacuation was required! It was a relief to get through the smoke to the fire escape and to join others from the BEA group outside the hotel. They soon realised that two second officers in the party had not evacuated and on scanning the hotel a torch was seen flashing SOS in morse code from a window! The fire fighters were alerted and positioned the highest turntable ladder which did not quite reach the window. An extension ladder was roped on and a pilot was rescued. Some people did not survive the fire and there were fears for the missing pilot. Having slept through the drama he was surprised to be woken hours later when firemen knocked down his door as they searched the building. For many years this pilot rescued by ladder carried a length of climbing rope in his flight bag. From that day John made a point of checking fire escape routes in hotels!

The Trident was operated with a Captain and two First Officers, P2 in the right hand seat and P3, the systems panel operator and monitoring pilot, in the third seat. The two first officers switched seats after each sector. The autoland system was truly world class and was progressively developed to CAT 3B. One winter day John

operated 3 sectors in the UK when virtually all the commercial aircraft airborne were Tridents. An interesting feature was the use of reverse thrust on the pod engines in the air - the descent rates achieved were impressive! In 1975 BA set up a Shuttle operation on the London to Glasgow route with hourly departures, and with the promise to take all who arrived at the departure gate by 10 minutes before departure. Tridents operated both the main service and the back-up aircraft, and the Shuttle operation grew as several other domestic routes were added.

In 1985 John had a change of lifestyle when he converted to the Boeing 747. As there had been no BA pilot recruitment for around 10 years he was just 10 places from the bottom of the 747 seniority list. With the bid-line system the senior pilots avoided the lengthy multi-sector trips throughout Africa, partly because the allowances were lower. The junior pilots were nicknamed the "Africa Corps", and the trips had plenty of time off in interesting places. The BA flight and cabin crew contributed to a recreation club which kept all manner of sports kit, including tennis rackets, windsurfers, bicycles, golf clubs around the network. In Harare the club also had an old glider and John soon went solo and enjoyed soaring in the amazing thermals along with the eagles.

1990 was another year of change when John bid for a Command course on the Tristar based at Gatwick. The Gulf War broke out during line training, and the course was completed just before the downturn in aviation stopped conversion courses. The Tristar fleet had great variety with mainline BA aircraft operating on routes like New York and Bermuda, along with Caledonian Airways aircraft in charter configuration of 399 seats serving holiday routes, mostly around Europe. Caledonian transatlantic flights were sometimes challenging for the short range Tristar, and refuelling stops at maritime airfields were not unusual. John became an IRE /TRE and some of his work entailed training 216 Squadron RAF crews. When the Tristar was retired from BA scheduled services, the work became very quiet in the winter months. The time off gave John the opportunity to take a course at a technical



John in Rallye Quiberon 1960's



747 5th Pod engine ferry Harare



747 prepared for 3-engine ferry

college on operating machine tools and he fulfilled a long held ambition by making model aircraft engines.

After five happy years on the Tristar John returned to the B747 fleet at Heathrow, and worked his way through the training appointments to become Training Standards Captain. As TSC the training was more interesting and the flying more varied, with operations like 3 engine ferries. Previous practice had been to deliver a replacement engine down route using a 5th pod. BA changed policy and flew aircraft with defective engines back to base using a 3 engine ferry take-off with no commercial load or cabin crew allowed. The damaged engine would be prepared for ferry by removing the fan blades and blocking the air to the core of the engine. The take-off was a balancing act as the handling pilot increased the thrust on the asymmetric engine in line with increasing rudder effectiveness as the aircraft accelerated.

John joined a team designing and presenting non-technical behavioural skills courses for pilots. The Flight Operations Director was concerned that within the industry some pilots were becoming marginalised and seen as just "engine drivers". It is important that pilots are the leader and manager on board, and that they understand the customer, the business, and not just operational issues. After five years as TSC on the Classic 747 John converted to the 747-400. Having been away from private flying for some time John renewed his SEP rating in Johannesburg and enjoyed renting aircraft whilst down route in Africa and N America.

John joined GAPAN shortly before retirement, and was impressed by the interesting visits and the social side of the company. Assistant Dacre Watson invited him to the first Livery Schools Link Education showcase at Apothecaries Hall where students from London schools were offered advice on career options. Liveryman John Mason was at the showcase and mentioned a scheme that enabled parties of school children to visit the London Gliding Club at Dunstable to fly in a glider with volunteer instructor. John was interested and took over the running of the gliding scheme. He later became a Trustee and, several years later, Chairman of the Benevolent Fund which

primarily supports pilots and their families who are having difficulties, as well as aviation-related scholarships and bursaries. John spent several years representing our Company on the Livery Schools Link, coordinating the efforts of livery companies helping London Schools. Over the years John worked to expand the schools gliding scheme, and introduced Lasham and Booker to increase the capacity. Several other livery companies joined the Air Pilots in support of their affiliated schools increasing Air Pilots' influence within the livery movement. John later helped to introduce gliding scholarships so that students could spend a week at a BGA young gliding centre and learn to fly, some to solo standard.

As a complete change from flying airliners John enjoys being a member of a group maintaining and flying a vintage Tiger Moth that was built in 1940 by Morris Motors. Some of the skills he learnt making model aircraft, and his interest in engineering, come into play when helping to maintain the Moth. The Tiger is great fun and is usually benign when operating from grass, but the tail skid and the absence of brakes can make directional control very tricky on hard runways. A recent flying highlight for John was an adventure in the Tiger Moth to St Stephan in Switzerland with a group flying 12 other Moths. A wonderful and memorable experience.

John is fortunate that he was a professional pilot from the age of 20 and in his retirement being a member of the Air Pilots means a great deal to him. He benefitted during his life from the support of others to follow his dreams and now enjoys putting something back to help others achieve their potential.



A PROFILE OF THE NEW WARDEN RICHIE PIPER

By the Editor

Flying has been a lifelong passion for Richie, having grown up near RAE Farnborough where his father was a senior scientist. Sadly the need to wear glasses meant his RAF flying career was stillborn, but a business career in IT funded the gaining of a commercial licence through the self-improver route. His flying includes displaying his own classic aircraft, and instructing, where he very much enjoys sharing his love of aviation. His enthusiasm for older aircraft has led to his involvement in the Historic Aircraft Association where he is on the management committee.

Richie takes an active part in three Air Pilots charities, serving as a Trustee of the Air Pilots Benevolent Fund and Chairman of Trustees of the Air Pilots Trust and the Air Safety Trust, and is keen to support their objectives, especially encouraging young aviators and school children to get their first taste of flying. With the AST and APT involved in the investment in our new office - Air Pilots House - Richie was appointed as director of Air Pilots Property Limited, which manages the building.

As Chairman of the Air Pilots Flying Club Richie is part of a team that organises social fly-ins and lunches, and supports charities that encourage youngsters into aviation with pedal planes and GA simulators. The Club also provide a number of Gliding Scholarships.



As part of the Scholarship selection team Richie utilises social media to publicise these schemes as well as the work of the Air Pilots and activities of City Livery Companies.

His business career has included working in the City with finance, legal and insurance organizations providing consultancy and project management. This included a project with a major law firm due to go live on the Friday after Great Storm of 1987 where Richie was the only member of the team able to get on site and the project was only delayed by 12 hours.

Richie enjoyed rugby as player, and latterly as coach and referee; he and his wife Gill enjoy walking, sailing and skiing. They have two children who work in medicine and insurance.

GAZETTE

APPROVED BY THE COURT

12 MARCH 2020

ADMISSIONS

As Upper Freeman

Peter John Patrick McCARTHY

Peter John SAXTON

Darryn Robert WEBB (NZ)

William James WOOTTON BSc (HK)

As Associate

Erwin EIJSERMANS (OS)

ACKNOWLEDGED BY THE COURT

12 MARCH 2020

REGRADE

To Livery

Cynthia ROBINSON

David-John GIBBS

To Upper Freeman

Bryce McCABE (HK)

REINSTATEMENT

As Upper Freeman

Captain Shaun MAYHEW

DECEASED

Robin PITALUGA

Howard THOMPSON

RESIGNATIONS

Peter BRYAN

Arvydas CETYRKOVSKIS

Brian CHU (HK)

Matthew DAVENPORT (AUS)

Anthony HILTON

Philip JONES

Ahmad KHAWALDEH (OS)

Jonathan LAM-KEE

John MEGARRY (HK)

Peter MONEY

Timothy NATHAN

Laurence PRINTIE

Mary TROWBRIDGE (AUS)

Philp WHITEMAN

Philip WIGNALL

FROM THE DESK OF THE DIRECTOR AVIATION AFFAIRS

Liveryman John Turner

THE NEXT DECADE / THE NEXT FEW MONTHS

In the last issue I wrote, “we will undoubtedly continue to hear increasingly strident calls for more political focus on the environment and climate-change countermeasures.” I did not envisage the UK Court of Appeal finding that UK government approval of a 3rd runway at Heathrow is illegal because they did not consider UK’s commitments under the 2016 Paris Agreement! Nor did I envisage the Coronavirus (or Covid-19 or whatever it is called as you read this) becoming such a major global issue. As the news reports become increasingly pessimistic, those of us who can ‘hunker down’¹ for the duration should spare a thought for all the airline flight crews who must continue to operate around the world and for their families.

Reduced passenger demand in the face of the virus has already led to the collapse of one UK airline on 5th March and others will be facing business uncertainty, so flight crews and their families will have worries about their own financial futures as well as any virus. In the 29th February London Times, columnist Janice Turner (no relation) suggested the Coronavirus might curtail the desire for travel sufficiently to make a 3rd Heathrow runway unnecessary (many flights from there have already been cancelled). She then described how some people, especially the young, now view aviation as follows:

“Flight guilt” is a word in several languages: Flugscham in German, flygskam in Swedish. Not yet in English, though the current university generation has started to see flights like smoking or even drunk-driving: an undesirable, antisocial habit. Some young people have taken a no-fly pledge, others believe that we should all be allowed a single pleasure flight a year but be taxed progressively on each subsequent journey. Not illogical since just 15 per cent of adults take 70 per cent of all flights. Yet it seems a weird age in which to be young, when the yearning for adventure pulls against political beliefs and apocalyptic dread.

Our UK Environment Committee, now disbanded, quickly discovered we are not experts in environmental matters. Nonetheless, it demonstrated that airliner noise and emissions have reduced dramatically with the introduction

of each new type; aviation has been leading the drive to reduced environmental impact through technology and that trend is expected to continue. There will always be two sides to the climate emergency debate that has parallels elsewhere. In dealing with Corvid-19, we can either close the borders, confine everyone in their homes and lock-down society and the economy, or we can take a more balanced approach that will inevitably allow some spread amongst the population but not overwhelm national resources in the process. Dealing with a climate emergency presents similar choices.

An initial look at UK government data² shows civil aviation’s estimated contribution during take-off and landing to emissions of key pollutants amounts to some 2% of carbon monoxide, 3% of nitrogen oxides and 7% of sulphur dioxide. This excludes emissions from domestic and international civil aviation in the cruise and from international shipping; when included, the aviation contribution seems to increase to some 6%, 15% and 9% respectively. From a UK perspective, emissions from aircraft cruising at altitude or from international shipping in sea territories distant from the UK make a relatively small contribution to ground-level air quality in the UK compared with emissions occurring during take-off and landing and from domestic shipping around UK coastal waters, but they do contribute to global air pollution. Some of these figures may seem disappointingly high and others encouragingly low. Notably, aviation is rarely the greatest contributor to any individual substance.

Aviation plays a pivotal role in economics, finance, trade, labour movement, Corvid-19 and national defence & security; it needs an advocate to promote its position and inject some balance in the climate debate, even if this does not fit comfortably with some modern world views. However, the Honourable Company of Air Pilots is independent of airlines and pilots’ unions so this could be a logical space for us to engage.



IDENTIFYING THOSE WITH THE SKILLS TO MEET THE AVIATION SKILLS SHORTAGE

We have written to the UK Civil Aviation Authority and the International Civil Aviation Organization, as follows:

“Improved reliability, increased flight deck automation and increasingly complex interdependent aircraft systems have helped to lower commercial air transport accident rates dramatically. In contrast, when those systems fail they can present an exceptionally confusing, potentially overwhelming scenario and pilots facing that challenge rely on their experience and training to resolve a safe outcome.

Air France 447 Airbus 330 and Boeing 737-Max accident reports recommend changes to pilot training but the output of any training will depend on the standard of trainee input. An individual's capabilities after training will depend, in part, on their aptitude and ability to assimilate that training. Many UK airlines find aptitude testing a cost-effective part of selection; it is good practice, but it is not universal practice. Neither flying aptitude tests nor minimum entry standards are mandated internationally for those starting commercial pilot training. We see this as a major shortcoming in international commercial air safety. When student pilots are selected solely on the basis of their ability to pay for training or their family background, those that lack the aptitude for flying will not become the confident and capable pilots needed to cope safely with the extremely complex situations their aircraft or environment may produce.

Demand for qualified pilots is forecast to outstrip supply so this is precisely the time we must protect and improve standards. Pre-selecting trainees for their ability will not only make the pilot supply pipeline more efficient, it will also improve the standard of pilots and recurrent training effectiveness within the international airline fleets.

Accordingly, we urge the Civil Aviation Authority and the International Civil Aviation Organization to establish minimum standards that include flying aptitude test results as part of the prerequisite for those planning to enter the world of professional aviation.”

AVIATION SKILLS SHORTAGE – INTERESTED IN AVIATION?

Please email daa@airpilots.org using the title INTERESTED IN AVIATION or write to DAA at the office address, Air Pilots House, 52A Borough High Street, London, SE1 1XN, UK if you've not already submitted your story about why you became involved in aviation. I would like more than the current 24 responses to be able to draw sensible conclusions worth further dissemination.

AIRSPACE – SHARE or SEGREGATE

UK industry is involved currently in every aspect of space travel except launch and recovery. The Space Industry Act 2018 now permits launches for space from UK and a new UK Space Regulator is being established to support a first UK launch by the end of 2020. The initial frequency of space launches will be low but an acceleration in launch rate seems inevitable.

This means users in the already crowded UK airspace will soon include space operations as well as Commercial Air Transport, General Aviation and unmanned air vehicles. Vertical³ or horizontal⁴ space vehicle pre- and post-launch safety could require large airspace volumes; blocking that airspace from other users for an extended period to cover potential eventualities of delayed launch etc. will not be viable.

Once again, we see the need for the UK to abandon airspace control through segregation and establish airspace sharing that is safe and effective for all potential airspace users. However, for all users to obtain unencumbered safe and efficient access, everyone will need to step up; I am sure that safe airspace sharing will need all users to adopt new behaviours and competencies as well as new technology.

1. “To make yourself comfortable in a place or situation, or to prepare to stay in a place or position for a long time, usually in order to achieve something or for protection”: <https://dictionary.cambridge.org/dictionary/english/hunker-down>

2. <https://www.gov.uk/government/statistical-data-sets/energy-and-environment-data-tables-env> Table ENV0301 (last checked 29 Feb 20)

3. e.g. rockets

4. e.g. Virgin Galactic launching passenger craft or large aircraft launching satellite-carrying rockets

THE COMPANY'S ANNUAL GENERAL MEETING 16 MARCH 2020

By the Clerk

Our diners dwarfed by Merchant Taylors'

Captain John Towell was installed as Master for the Company's 91st year, in succession to Malcom White, with IPM Colin Cox joining the 'back benches'. John's full profile can be found on page 9. Warden Nick Goodwyn therefore becomes Master Elect, and Richie Piper was elected to become the new Warden; his profile is on page 14.

The annual service was conducted by the rector of St Michael's Cornhill, Charlie Skrine, who stood-in at the last moment when our Honorary Chaplain, Ray Pentland, was indisposed due to family reasons. The congregation then repaired to Merchant Taylors' Hall for the AGM and Installation ceremony. The Master, Malcolm White, presented his annual report (to be found on the Company website) and the Hon Treasurer, Liveryman Nick Goulding presented his report, a version of which follows:

'The Honourable Company's financial result for the year ended 30 September 2019 was a small operating surplus, whereas in the previous year to September 2018, there had been an operating deficit. This improvement and movement from deficit into surplus was due primarily to the absence in 2019 of non-recurring consultancy costs in 2018 related to the development of a social media presence.

Total income was fractionally more than the previous year and comprised 53% from Quarterage and Livery Fines, 20% from the Gladys Cobham Trust, 11% from investment



income and 2% donations and miscellaneous income. The remaining 14% component of total income arises from functions and ceremonies but against which there are direct costs which are included in total expenditure. The actual amounts derived from each category of income were very similar to the amounts recorded in 2018.

On the expenditure side of the accounts, total operating costs were slightly lower than in 2018 but, as mentioned, this was due to the absence in 2019 of consultancy costs incurred in 2018. After adjusting for these one-off 2018 costs, there was in fact a modest increase in ongoing operating expenditure of some 2%.

Little variance occurred in ongoing cost levels in each category of expenditure between 2018 and 2019 with the major components of 2019 expenditure being staff costs

Malcom & Vanessa White, having passed over the mantle



Proceeding steadily



The Clerk and the home team



and accommodation and administration expenses. The other major items were 'Air Pilot' magazine and the net cost of functions and ceremonies. Expenditure amounts in the remaining cost categories were all much smaller individually and aggregated to less than 5% of the total.

The other items included in the Income and Expenditure account which do not form part of the operating results are connected with the Honourable Company's investments which are managed by our advisers, JM Finn. The accounts record realised gains or deficits on disposal of investments and also show separately the unrealised surplus or deficit on revaluation of the investment portfolio at 30 September each year. The deficit on actual disposals made in the year might seem worrying - but is not - as it is based on their revalued amount in September 2018 and not on the original cost of the investments. The substantial increases in unrealised gains both in 2019 and in 2018 demonstrate how much the portfolio has benefited both from the general increase in investment values in recent years and of course the efforts of our investment advisers. The tax charges shown in the Income and Expenditure account include both the corporation tax currently payable on disposals made and also the deferred tax provision calculated on the change in investment values in the year. The investments are held for the long term and it is the income generated by them that is of more immediate importance than their realisable value.

The Balance sheet of the Honourable Company shows a modest increase of net assets compared with 2018. The largest category of assets is our Investments and the balance sheet also includes the Company's share in the ownership of Air Pilots House which, together with other fixed assets such as office equipment, increased by 16% compared with the 2018 figure. The balance sheet therefore shows a slight increase in the net total between September 2018 and 2019.

Outlook for 2020

In looking forward into the current accounting year to 30 September 2020, of which we are nearly half way through, there is continuing uncertainty in financial and investment markets which could affect the values of our investments but at the operating level, the costs associated with the regular activities of the Honourable Company are more dependent on factors such as general inflationary cost increases, and impact of changes in membership numbers. The ownership of Air Pilots House provides a greater

ability to control occupation costs than was the case previously so, despite the uncertainties in investment markets, a continuing small operating surplus has been budgeted for 2020 and nothing to date suggests that it will not be achieved, subject always to the impact of wholly unexpected circumstances.

The Company's financial position is kept under close review throughout the year by monitoring monthly income and expenditure against both budget and previous year amounts so that any significant divergence can be established quickly and action taken where necessary. Investment performance is also monitored in conjunction with our investment advisers and appropriate changes in investment allocations made where necessary'.

In conclusion, the Treasurer expressed his grateful thanks to the Learned Clerk and his staff for their efforts in achieving a very satisfactory financial result in 2019. He also thanked the other members of the General Purposes and Finance Committee and the Auditors for their professional assistance.

The results of the Court Elections were announced: Liverymen Chris Palmer was re-elected; and the Court welcomes Liverymen Stephen Durrell, Zoe Gell, Christine McGee and Sebastian Pooley as newly elected members. The new Court was sworn in, the appointments of the Company's Honorary Officers were confirmed, and the new Master, John Towell, was installed. Afterwards John and his wife, Linda, greeted members and guests at a champagne reception. Due to Public Health England advice at the time, there was no formal receiving line and attendance was, understandably, reduced from the initial number of bookings. However, following the reception a splendid dinner was enjoyed by all in the Great Hall and at the conclusion of which, the new Master gave his inaugural speech.

John's speech, a copy of which can be found on the Company website, concluded with the Company's traditional toast - "The Honourable Company of Air Pilots, may it flourish root and branch forever."

*Our new Master
John Towell*



COVID-19 - ITS IMPACT ON AVIATION

By the Editor

It is perhaps fruitless to set out the state of play in the industry, because matters are moving so swiftly. Nonetheless I believe it is worth doing so, if only to show your grandchildren this magazine in a few years' time, and say "I lived through this".

I set out below a summary of the recent actions taken by those major airlines of interest to our membership:

International Consolidated Airlines Group

The owner of BA & Iberia has cancelled all flights to China and Italy, severe curtailment of other Asian routes. From April network capacity cut by "at least" 75% compared to 2019. Top management changes suspended. Total liquidity of €9.3bn.

Easyjet

40% capacity cut in March. Now announced it will ground "the majority" of its fleet. Liquidity of €2.1bn. CEO Johan Lundgren lobbying hard for industry-wide support from the UK Government.

Jet 2

On March 14, stopped all flights to Spain (& its territories) with immediate effect. Spain is easily the most important market for Jet 2, yet only 4 days later it announced the cessation of all flights until at least May 1. Cash of £1.5bn at 18 March.

Ryanair

Grounding "the majority" of its fleet. From April capacity will be cut by up to 80%. Liquidity of €4bn+. Staff, including Michael O'Leary, taking a 50% pay cut for April and May.

Norwegian

Made a fairly desperate sounding plea for government support. However has a low level of fuel hedging relative to competitors. Cancelling 85% of flights and laying off 7,300 staff (90% of its workforce), at least temporarily.

Cathay Pacific

Reducing capacity by 96% from April, and operating a network of only 15 cities. The airline lost \$257m in February alone. Its low cost subsidiary, HK Express, is shutting all operations until at least the end of April.

Air New Zealand

International revenues down 85%. Accepting a government loan of \$519m.



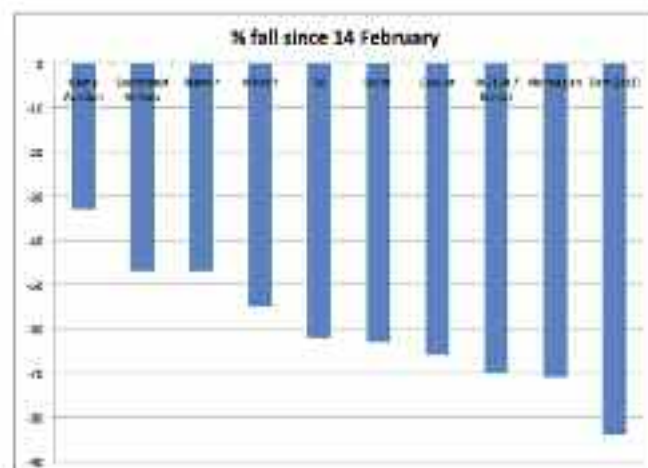
A rather quiet apron at GVA on March 16

Photo by the Editor

Many of the above airlines have started consultation about redundancies for flight crew. The implications for those in the training pipeline are horrendous. Yet if the website of the major international training provider, CAE, is any guide, it is playing catch-up. CAE is still leading with a 2018 "demand outlook" that suffers from the straight-line syndrome.

IATA is forecasting a loss of \$113bn of revenues across the global industry for the 3 months to end May.

Whilst international equities markets are imperfect yardsticks of value at times, the fall in market capitalisation of leading airlines is very striking. The chart below shows share price declines from 14 February to the time of writing (March 20th).



REGIONAL REPORT

Australasian Region

AUSTRALIAN BUSHFIRES

- A PERSONAL EXPERIENCE

By Chairman, Australasian Region, Rob Dicker



Unprecedented is a word that has often been used over the last few months to describe the recent Australian summer. What follows is a personal account of events as they unfolded during the summer of 2019/2020.

2019 had been a very dry year on the east coast of Australia. Where I live, about two hours drive south of Sydney, near the city of Nowra, I had never experienced it being so dry. Indeed it was so dry that the grass crackled under your feet.

The first fires broke out in late October and took hold on the north coast of New South Wales and in southern Queensland during November. They came into focus for me when I flew from Sydney to Brisbane for the Queensland Air Pilots dinner that was held during the Master's visit. As we flew up the East Coast from Sydney the smoke from the fires was clearly visible along a broad stretch of the coast and when we landed in Brisbane the smoke haze and the smell of smoke was obvious. The scene was the same when I returned to Sydney the following day.

The following week a Bell 214 "Big Lifter" helicopter crashed near Towoomba, Queensland, completely destroying the helicopter but the pilot had only minor injuries.



On November 25 the Currowan fire started on the south coast, to the west of Bateman's Bay, after a "dry" lightning strike, and a couple of days later the Green Wattle Creek fire started to the west of Sydney. This would mark the start of weeks of smoke haze, waking up in the morning to the smell of smoke and visibility so low at times that it was below the ILS landing minima at Nowra airport.

Flying at the Albatross Aeroclub was, more often than not, cancelled due to the marginal VFR conditions. Circuits had to be flown in almost instrument conditions as there was no discernible horizon in the smoke haze.

It also marked the beginning of a ramp up of deployment of aviation assets in the fight against the fires. At Nowra, which is the RAN's Naval Air Station, known as HMAS Albatross, these assets included a half dozen fire-fighting helicopters, two Air Tractors on floats, and another three conventional Air Tractors. The airport also had occasional visits from the Coulson C130, callsign "Bomber 134". These assets remained deployed right through to late January 2020.

On December 1 the Currowan fire first reached Emergency Warning level as it threatened small towns on the NSW south coast. On December 19 a fire was deliberately lit near Tianjara. This fire eventually merged with the Currowan fire and over the next several weeks would grow daily, slowly extending towards the regional city of Nowra with a population of 30,000. On the afternoon of December 23 we were treated to the spectacle of several waves of large aerial bombers (DC10, B737, and C130) as fires threatened properties on the outskirts of the city.

Things were calm for us over Christmas but many had already lost properties to the fires and sadly, lives had also been lost. On New Year's Eve morning many of the 4000 people, holiday makers and residents, still in Mallacoota, a

coastal town near the NSW-Victorian border, were forced to flee to the beach in conditions that could be described as apocalyptic, as the fire bore down on the town. Meanwhile, in Sydney, with a touch of irony, plans for the New Year's Eve fireworks to go ahead remained in place. January 4 was forecast to be another extreme fire day with forecast strong NW winds followed by a southerly wind change late in the day. These conditions have the ability to turn what was the flank of the fire into a fire front, tens of kilometres long. The NSW Rural Fire Service (RFS) released a Fire Spread Prediction map showing the potential for the whole of Nowra to be impacted and the potential for ember attack within just a few kilometres of where we live.

We had already made plans to evacuate our property and go to friends who live next to a nearby beach. As the day progressed the forecast strong NW winds did not really happen, possibly because the fire was developing its own weather system with a huge pyro-cumulus cloud overhead. We left our property in the middle of the afternoon shortly before the Emergency Services announced that it was "too late to leave" from our area, and that people should "remain in place and take shelter" as the fire arrived. As it transpired the fire went up the valley behind us and

then spread into the Southern Highlands in the late evening destroying more property as it did so. Our property was unscathed apart from significant ash fall.

As the fires continued to burn through January, tragically, the C130 Hercules Bomber 134, crashed after dropping a load of retardant on a fire in southern NSW, killing the three American crewmen on board.

In early February a low pressure system developed along the south east coast of Australia dumping significant rain on fire grounds and causing floods in other areas. We have now had more rain in the first two months of 2020 than for the whole of 2019.

The total impact of the fires to mid-January is 18.6 million hectares burnt, 2,779 homes destroyed, another 3000 structures destroyed and 34 lives lost, including 3 aircrew.



A VISIT TO RAF MILDENHALL

By *Liveryman Group Captain Tom Eeles*



One of the base chapel's beautiful stained glass windows

Editor's introduction:

Ian & Tom were lucky enough to go on a private visit to Mildenhall in January. I had hoped this would serve as a primer for those lucky enough to attend the over-subscribed Company visit to Mildenhall and Lakenheath in April. This has understandably been postponed. So this will serve as a taster for what awaits in due course.

On the kind invitation of Colonel Mark K Ciero, known to all as Colonel 'Zer-O', Liveryman Air Marshal Sir Ian and Lady Macfadyen and Liveryman Group Captain Tom Eeles were privileged to be given a personally hosted tour of the facilities at RAF Mildenhall, one of the largest USAF air bases in the UK, and a very important one at that. The prime reason for our visit was that Ian had been christened at Mildenhall during the war when his father was the Station Commander.

But first, a bit of history. The site was purchased by the British Government in 1929 to be developed as an RAF airfield. It opened in 1934 and was the starting point for the first ever air race from the UK to Australia, which was won by Campbell and Black in a DH Comet. On 6 July 1935 the airfield hosted King George V and Queen Mary, along with other members of the Royal Family, for the ground-based events of the Royal Review of the RAF; the flying element was undertaken not far away at Duxford. I have a copy of the programme of this event. It is interesting to see that of the 31 squadrons lined up for inspection not one was equipped with modern monoplanes.

Mildenhall was an active front-line bomber base during the Second World War and subsequently hosted the Headquarters of No 3 Group Bomber Command until

1967. In 1950 it was transferred to the USAF, and until the end of the Cold War in 1991 was the main UK base for USAF strategic aircraft. In 1992 the 100th Air Refuelling Wing arrived. This unit's origins can be traced back to 1942 when it was based at Thorpe Abbots in Norfolk equipped with the Boeing B17 where it earned the nickname of "The Bloody Hundredth". In 1995 the 352nd Special Operations Group (SOG) arrived, equipped with the Lockheed MC130J Hercules and in 2015 the SOG upgraded to become the 352d Special Operations Wing (SOW), and added the tilt rotor CV22B Osprey to its inventory.

We arrived at the Main Gate entrance fully equipped with every conceivable identity document but, no, our guide met us straight away, identified us and so there was no requirement for mug shot photos and special passes, a welcome difference to the sometimes rather demeaning process at some of our own establishments. We were escorted to the headquarters building of the US Air Forces in Europe, originally the RAF Station Headquarters. A stone memorial plaque in front of the building commemorates the 1935 Royal Review. Here we were met by Colonel Mark 'Zer-O', Director US Air Forces in Europe – UK. The Colonel briefed us on the US Air Forces currently hosted in the UK, which is still a significant contribution to Western security. US Air Forces in the UK consists of 24,200 personnel, comprising 9,150 on active military duty, 2,100 UK and US civilians, and 13,000 US family members. In addition to the two large airfields at Mildenhall and Lakenheath there are smaller establishments at Molesworth, Alconbury, Croughton, Menwith Hill, Fairford and Welford. The principal aims of US Visiting Forces are to support NATO, deter Russia, counter trans-regional threats and enable global operations. The priorities for the Headquarters hosted in the UK at Mildenhall are to prepare for the integration and bed-down of the F35 at Lakenheath, to staff the future of RAF Fairford, to improve readiness and resilience of US Forces, to sustain relationships, and to deliver Joint Intelligence Analysis Center material. Examples of current operational activity by the Mildenhall-based 100th Air Refuelling Wing included Stealth bomber support, F35 European deployments, support for Baltic operations and those in the far North. During the period August 2019 to





One of the many signs outside a building giving its history and function

August 2020 the 352nd SOW expects to deploy on operations to 35 countries across Europe, the Middle East and Africa. As an example of recent activity, the Colonel gave an unclassified operational vignette on the strike on the Syrian chemical weapons facility in early 2018. This was an integrated precision attack involving US, UK, and French armed forces. He showed a 'before and after' photograph of one of the targets, the Barzan Research and Development facility, which was surrounded on all sides by civilian buildings. Inside the perimeter of the facility there

The interior of the base chapel, opened by HRH Prince Charles in 1982



was nothing left standing, nothing outside was damaged at all, illustrating the incredible precision available with modern weapons systems.

It was now time for a tour of the base so we all piled into a comfortable minibus. It immediately became apparent how well many of the original buildings erected in the 1930s had been identified and used for current purposes. All had distinctive signs outside indicating the building's date of construction and its original use. Examples included the original Officers' Mess, built in 1931, now named the Middleton Hall in memory of Pilot Officer Rawdon Hume Middleton VC, and now used for official functions and visiting officers' quarters, and an aircraft hangar, built in 1933 as an A type aircraft shed and used extensively by the 1934 Air Race participants, now used for maintenance of aircraft ground equipment. There was a well signposted Heritage Trail encompassing these historic buildings. It was also apparent that more recent construction had, where possible, followed the architectural style of the original buildings.

The vast size of the Mildenhall base soon became obvious, the distance around the perimeter road being over six miles. After crossing an active taxi way we arrived at one of the SOW's MC-130J Hercules, powered up and ready for us to explore. Our hosts on board were a pilot on his first assignment after flight training and a smart lady loadmaster. On being asked how long it had taken for him to get to the squadron after graduating from officer training, the pilot replied 'three years'. The USAF's training system seems to be more efficient than that of the RAF! It was clear from what we saw on the flight deck and in the hold that the aircraft was well equipped for its special operations role.

We then moved on to the 100th ARW flight line where



KC-130J of the 352nd SOW



A KC-135 of the Bloody 100th, still going strong after many years.

some KC-135 aircraft were parked. Access to these is not for the faint hearted, more akin to getting into a B-17 upwards through a hatch than upstairs into an airliner, so we stayed outside. Despite their long service the aircraft's finish was immaculate and each one sported a unique and distinctive piece of nose art, reminiscent of the unit's B-17 forebears. Further away we noticed a Rivet Joint derivative, another example of Anglo/US cooperation. Unfortunately nearly all the CV-22B Ospreys were away from base so we were unable to see one, but this gave a good indication of their high utilisation. Returning from the live side of the airfield our final stop was the base chapel, a modern building with unique stained glass windows depicting the station's history, dedicated by HRH Prince Charles in 1982. Ian's day was made when he was shown photographs of the wartime chapel where he would have been christened. Our last stop was at Colonel Zer-O's service accommodation, instantly recognisable as a typical RAF married quarter, for traditional American dunking donuts and coffee. In summary, it was a fascinating visit to a very important military facility and we were admirably hosted by our American colleagues.

So what of the future? The proposed withdrawal of the USAF from Mildenhall was announced some time ago, much to the consternation of local businesses and people,



Pre-war scene at RAF Mildenhall. What is the aircraft? Answers to the author.



A Tiger Moth that didn't quite make it to the airfield

as this would blow a huge hole in the local economy. However, the closure date seems to be ever moving to the right and, who knows, may not actually happen. However, if the USAF ever does leave Mildenhall, it poses the question of what to do with such an enormous, specialist, and well equipped site. There is not much call for an international airport in west Suffolk and to decontaminate the site for other use would be a monumental undertaking after 90 years of military use. One thought comes to my mind. The RAF has all its valuable air transport eggs in one basket in Gloucestershire and all its irreplaceable ISTAR eggs in one basket in Lincolnshire. Perhaps a bit of redundancy in basing options would be a good idea.



*Original base of the Bloody 100th in WW2
Thorpe Abbots Photo by the Editor*

THE INTER-LIVERY SKIING COMPETITION

MORZINE, JANUARY 22-24TH

By the Editor

This was the tenth, and largest, iteration of the keenly fought annual skiing competition founded, and organised so ably, by the Ironmongers, now in the charge of Christopher Hudson. 39 teams took part, comprising 176 participants. The Air Pilots managed to field 2 teams – with eight participants in all. The youngest and oldest arrived in the French Alpine resort at the beginning of the week. The Editor certainly needed the practice; Associates Annie Cleve and Alex Reynier certainly did not.

By Wednesday we were all in place, and our Captain, Liveryman Sam Rutherford, had organised a half-day of race training with Romain of the ESF. Liveryman Caroline Gough-Cooper having come hot foot from another competition in Innsbruck barely needed such guidance. There had been a much needed snowfall the week before; without that the mountains would have been rather brown. Nonetheless the snow on the race pistes was appropriately hard. Aside from race training we had perfect guides in the shape of Freeman Ian Palmer, and particularly Alex, who had both skied the Porte du Soleil for many seasons.

A warm-up activity was a distance race on the Wednesday afternoon: as many kilometres as possible in two hours. Just what ancient limbs need after a morning of race training. For some unaccountable reason our four man team did not manage the top ten. The good news is that this was held as a fund-raiser for the very noble snowsports charity Snow Camp (see <https://www.snow-camp.org.uk/>). The total sum raised for this charity was nearly £16,000. Next year keep an eye out for how you can sponsor the Air Pilots team in this endeavour. At the party that night Snow Camp's founder and CEO, Dan Charlish, gave an uplifting talk, and the brief interview with one of his beneficiaries, Kym, a charming Glaswegian, brought tears to many.

The main race is the Giant Slalom held on the Friday. The start order for this is decided by a parallel slalom competition on the Thursday. Time to put Romain's wise words into practice. In the Editor's case, these obviously



flew out of his brain as the first gate approached. Almost all the team gained a better result than their start number for this race.

Friday's GS course was surprisingly long, with one or two traps for the over-confident; vin chaud at the finish was much needed. The Air Pilots had our best ever result. Individual overall positions were:

2nd	Alex Reynier
18th	Sam Rutherford
30th	Zara Rutherford
31st	Ian Palmer
33rd	Caroline Gough-Cooper
67th	Annie Cleve
113rd	Bea De Smet
136th	Paul Smiddy

Out of a total 231 finishers. This led to the following prizes:

Zara - 3rd place Ladies <40;

Caroline - 1st place Ladies >40 (& 1st age adjusted Lady);

Alex - 2nd place Men <36, and Second place overall;

Sam - 3rd place Men 36-59;

Team prize (The Vintners' Trophy) - 3rd place (Alex, Sam & Zara), and 2nd place on an age-adjusted basis;

Our Ladies team therefore won the Leathersellers' Cup for 1st ladies' team overall - our first ever gold. Keep a look out for this in the trophy cabinet at APH.

All in all a great result.

As you may have gathered, the results data is sliced and diced in every which way by the Actuaries! Our trophy, for the best improvement on last year, was won by Annemieke Cunningham of the Barber Surgeons.

Given we are the only livery company with overseas members, it would be great to see some participation from fast skiers from our Regions: you Canucks and Aussies in particular have been known to venture to the Alps for some decent skiing! However the event has reached its limit in terms of participants, so if we expand our team, other liveries will have to send fewer. This is not necessarily a problem since some liveries send up to 5 teams. The bottom line is that an early indication of interest to Sam Rutherford (sam@prepare2go.com) is welcome.

The 2021 Championships will be held at Morzine on 20-22nd January. Sharpen your edges! See <https://www.liveryskiing.com/>.



Alex Reynier, the Editor, Annie Cleve



Pre-race nerves for our team



Annie Cleve, Alex Reynier, Paul Smiddy, Zara Rutherford, with Sam Rutherford kneeling in front

BOOK REVIEW

A CONCORDE IN MY TOY BOX by Michael Riley

By Past Master Captain Peter Buggé

Mereo Books, December 2019 ISBN 978-1-86151951-1

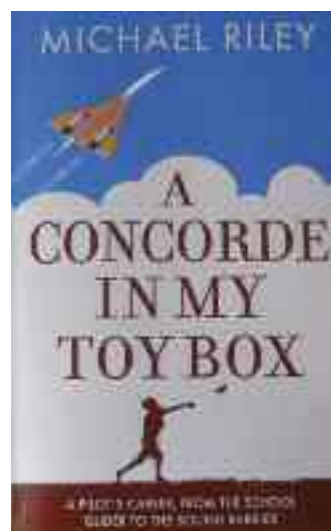
Some people are able to cram more into their lives than seems possible in the time available. Reading about their many achievements can make one feel a bit breathless but, after reading *A Concorde in my Toy Box*, Mike Riley leaves me feeling quite exhausted! In summary, Mike has been an organ scholar and musician of some repute (good enough to play a violin during a rehearsal of the LSO), a navigator, a pilot of Vanguard, Comet 4C, VC10, B707, B747 and Concorde - with training appointments on most of them, an aerobatic pilot and judge (at international level) flying Zlin, Stampe, Pitts etc, a club instructor, a check pilot at the Tiger Club and an author – and I've probably left something out. Not only all this but he is also well, and widely, read. Where did he find the time?

This is a long, intense read of some 530 pages in quite small print describing Mike's introduction to flying in (or on) a bungee-launched Grasshopper glider at school. After an RAF Flying Scholarship, two years at the College of Air Training at Hamble followed on one of the first courses in 1960-62, from where he went initially to BEA, then to BOAC/BA longhaul. Any of our many members who were at Hamble and/or flew with BEA, BOAC or BA will find many memories revived of people, places and incidents. Mike has the knack of remembering details most of us have long forgotten but which evoke the very essence of a place or event. There's technical stuff about the aeroplanes, stories about people, descriptions of route flying and the places which were visited all of which are evocative of the period that spanned the transition from piston-engined, propeller-driven aircraft to Concorde and (elsewhere) glass cockpits. This culminates in Concorde, of course, and Mike gives lots of detail about how it flew – or should I say how to fly it – which alone is worth the cover price. Within the story of his airline career Mike considers the training environment and how to go about the job in some depth; his description of his VC10 Command course is of particular interest. The subject is also visited in connection with teaching aerobatics and instructing at the Tiger Club and at Booker.

The two main threads of Mike's narrative, his airline career and his aerobatic and display flying, come and go in a generally chronological sequence. The descriptions of aerobatic flying, competitions and events are of great interest and the names of fellow UK team members – Neil Williams, Carl Schofield, James Black and others – will be well known to many who read this review. There is too much about the subject for sensible comment by one who was never involved in sport flying but Mike seems to cover the subject pretty thoroughly.

The book is easy to read and very well written, with a dry sense of humour never far away which is often used to emphasise a point. Where technical subjects are discussed which Mike fears may be found boring by some readers a warning is given inviting one to skip to the next section or chapter though I can't imagine many do. There is no index, which would be useful in a book of this depth and although the illustrations are fair perhaps the book deserves a better quality.

I have been asking my contemporaries over the past year or two to please write their memoirs of an era which saw important changes in aviation, from propellers to large fan engines, from early jets to Concorde, from specialist navigators to Flight Management Computers, whether for home consumption, publication or for our archives. Mike Riley has set the standard.



LAWRENCE SPERRY'S GROUND UNSEEN

By Upper Freeman Captain Mark McCullins, FRAeS

We often recount a long air-travel day and subsequent arrival at a distant destination to our friends and colleagues as a minor ordeal. We complain about the lines in which we waited, the bland food — or lack thereof — that was served on the aircraft, and the biting discomfort of the seat. Whilst we will quickly wonder at the sights and sounds of a new destination, we remain aloof to the travel experience that actually got us there in one piece. Brian Terwilliger's 2015 documentary, *Living in the age of Airplanes*, expounds on the fact that the airplane is not only a marvel itself, but has opened the world to us in ways that were unimaginable a mere century ago. It's not just the aircraft itself that has done this. It's also the myriad of subsystems and technologies that allow it to safely navigate vast distances and arrive within feet of the desired destination. Compasses, gyroscopes and stabilizers have become essential equipment in the navigation suites of a modern airliner, and it is no accident that technologies from the last generation of long distance travellers — ocean-going ships — evolved to allow airplanes to cover vast distances over ground unseen. Much of this evolution can be attributed to Elmer and Lawrence Sperry, whose inventions allowed modern air transport to flourish into the globe-spanning network of today.

Lawrence Sperry had a pedigree that would serve him well in bringing the tools of the ocean liner to the field of aviation. The son of the famous American inventor, Elmer Sperry, he had grown up surrounded by the tools of navigation and a spirit of exploration and invention. Elmer Sperry had developed the gyrocompass, a massive device that was immune to the magnetic effects of ships, and which revolutionized navigation at the turn of the 20th century. With over 70 patents to his name, in a wide variety of fields, he was regarded as an inventor second only to Thomas Edison. Lawrence followed in his father's footsteps, and was particularly enamoured with the developing field of aviation. He strove to emulate the Wright brothers by opening a bicycle repair shop, and in the summer of 1909, whilst his parents were on holiday, he and his brother built a glider in the basement of their house. Although the project incurred the wrath of his father, Elmer Sperry (who was not happy that the boys had disassembled the bay windows on the front of his house to remove the glider!), it resulted in a flyable aircraft once a 5-cylinder Anzani engine, that they had borrowed money to

purchase, was installed in it. He flew this aircraft locally, but soon realised that he needed a professional education in aviation. Lawrence was drawn to other pioneers in the field, and enrolled in Glenn Curtiss' aviation school from which, on October 15, 1913, he received Federal Aeronautics Pilot License number 11 from the Aero Club of America. He was soon working with Glenn Curtiss, and became fascinated with gyroscopes and their stabilizing properties.

Early pilots flew literally by the seat of their pants. The aircraft of the day were often naturally unstable, and required continual control corrections by the pilot to remain upright and pointed in generally the desired direction. Pilots needed a reference on which to base these inputs, and flying was conducted visually with reference to both the horizon and the surface of the earth. If a pilot lost sight of either one of these references, he would quickly find himself in a great deal of trouble and many aircraft and pilots were lost due to disorientation that occurred after flying into cloud or fog. Lawrence Sperry had the idea that, even if a pilot had lost orientation relative to the ground, a gyroscope would keep its orientation owing to the gyroscopic principle of rigidity in space. He immediately sought to use this principle to achieve automatic control of an aircraft in flight, much as his father had used gyroscopes to help stabilize ships. Rather than the pilot putting continuous control inputs into the aircraft to remain stable, the gyroscopic autopilot would sense any deviation from level flight and place those inputs on behalf of the pilot. The autopilot was born, and on June 18, 1914, it was demonstrated at the Airplane Safety Competition in Paris. Out of 57 entries, the Sperry autopilot received first prize, and he was awarded 50,000 francs with his face appearing in newspapers throughout Europe and North America. He soon formed the Sperry Gyroscope Company in tandem with his father and set out to transform the capabilities of the aeroplane.

Automatic pilot systems had their limitations given the technology of the day, so Sperry and his father set out to develop instrumentation that would aid human pilots in maintaining their orientation when out of sight of the ground or the horizon. This was spurred on by the likes of James Doolittle, who had considerable interest in blind flying. It was Lawrence's younger brother, Elmer Sperry Jr.,





who led the development of the turn and bank indicator, and the artificial horizon, both of which can still be found on aircraft today. As primitive as those instruments may look, they enabled the first blind flying experiments and were used by Jimmy Doolittle to conduct the first ever blind takeoff, approach, and landing on September 24, 1929. The age of long range air navigation and instrument flight had begun.

The aircraft of today circle the globe every minute of the day, and every day of the year. CNBC recently reported that Singapore Airlines had inaugurated the longest range commercial flight in the world - a 9,500 mile trek from Singapore to New York, of approximately 18 hours of flight time. It was conducted in an Airbus A350-900 ULR — Ultra-Long Range — Airbus' newest and most modern airliner. This aircraft will compete with the Boeing 777X to fly Qantas' lucrative Sydney to London route non-stop, with a full load of passenger and cargo. This flight would be approximately 10,500 miles, and would take roughly 20 hours. Aviation feats such as this push the limits of both aircraft and human operator endurance, and are truly marvelous technical achievements. While the flight deck of the A350 may bear little resemblance to the aircraft used for the first blind flying experiments, it retains many of the elements invented and used by these early pioneers. Beneath the blue sky and orange ground of both pilot and co-pilot artificial horizons, can be seen a compass strip that is identical to the rotating dial of the Sperry gyrocompass and turn indicator. Rotating gyros have been replaced by laser ring gyros which serve the same function, and the autopilot uses the stability information derived from them to move the control surfaces of the aircraft in much the same way that Lawrence Sperry envisioned. Other Sperry family innovations are incorporated as well, including



The flight deck of an A350-900 on approach into Bordeaux, France. The artificial horizons and compass indicators are visible at both pilot positions (McCullins).

A Sperry gyrocompass and turn indicator (Smithsonian)

magnetic flux valves that provide distortion free directional information to the aircraft's computers in the manner that Elmer Sperry's gyrocompass provided this information to ocean liners and warships a little more than 100 years ago. It is difficult for us to appreciate the wonders of air navigation in a world where long range commercial flying has become commonplace. This is compounded by the fact that the technologies and instruments that enable it are hidden behind closed and barred cockpit doors, accessible only to those who use them to accomplish the seemingly simple task of navigating an airliner halfway around the world. While not secret or even novel, they remain unseen by the traveling public. These technologies and capabilities were mere dreams in the 1920s, and needed to be invented, experimented with and perfected. This was difficult and hazardous work, undertaken by men who were determined to fly and navigate without limits. Lawrence Sperry dreamed of flying over a ground unseen, and in combination with his father, younger brother, and legends of aviation such as Glenn Curtiss and Jimmy Doolittle, his inventions laid the foundation for all long range instrument flying. He died pursuing this dream, crashing in the English Channel aged 31 while flying an experimental aircraft equipped with his avionics.

The next time you go to complain about a long flight, perhaps take a moment to wonder at the improbability of what you have just been through; then, spare a moment to think about the contributions of Lawrence Sperry to the field of aviation, and wonder what he would have to say about your whole experience!

References:
 Brady, T., "Touch the Wind," *Twin and Turbine*, 1998.
 Scheck, W., "Lawrence Sperry: Genius on Autopilot," *Aviation History*, Nov. 2004.

COMPANY POLICY RE COVID-19

The Company's policy (in the UK) with regard to the declared pandemic has been to follow guidance and advice from Public Health England on the appropriate course of action to take for our various planned activities and events, and including the day-to-day operating of the Company office and Air Pilots House (APH). The various Regional Chairmen and Executive Committees will have their own policy and plans for necessary steps to be taken in their respective national jurisdictions and circumstances.

With the particularly important AGM accomplished - and the fact that the UK has now moved to a far more restrictive regime of control measures, with 'social distancing' and the 'encouraged' self-isolation of those over 70, together with curtailment of travel unless absolutely necessary - we must reschedule (if possible) and cancel activities planned during April and May, and possibly into June and July as well.

The office is capable of functioning with all members of the secretariat working remotely, so disruption to the day-to-day administration of the Company should be minimal. If anybody needs to contact the office, the best and preferred form of communication with members of the office staff is by email.

The decision to postpone or cancel events and other activities – to include all scheduled meetings at APH - will be notified as soon as possible to those concerned, and will be displayed on the Company calendar, which can be accessed online from the link on this page on the website: <https://www.airpilots.org/members-pages/company-calendar/>

Where possible/practical, meetings will continue using remote facilities such as Zoom.

As you will all appreciate, we face an ever-changing scenario, so some disruption and confusion is probably inevitable. However, we will try to keep this to a minimum wherever possible.

Activities/Events which are now cancelled:

- **New Members Briefing** – 16 April
- **Cobham Lecture** – 22 April
- **Luncheon Club** – 22 April
- **Livery Dinner** – 28 May. This will be rescheduled if practical in June or July.

All Visits which were due to take place in April and May are cancelled. These may be rescheduled at a later date or next year, but that will be decided by the Visits Team.

MENTORING and PEER SUPPORT

During these challenging times, some members may be considering the impact of the current crisis on their future as pilots in our industry. Please do not hesitate to get in contact with any of the Air Pilots' mentoring team if you would like to talk through anything relating to your continuing professional development.

<https://www.airpilots.org/members-pages/mentoring/>

If we can help, we will.

Peer Support is the opportunity to contact a pilot peer, in complete confidence, to ask for support if you feel that you would like to talk about anything that is impacting on your whole health and wellbeing through this challenging period. Nick Goodwyn is a pilot peer and is available to provide peer support in confidence. His contact details are on the membership database.

These are extraordinary times, but we will endeavor to get back to 'business as usual' as soon as it is 'safe' and permissible to do so.