



AIR PILOT



**INSIDE
THE MASTER'S TOUR
STOW MARIES VISIT
SCHOLARS GO FLYING**





THE HONOURABLE COMPANY OF AIR PILOTS incorporating Air Navigators

PATRON:

His Majesty The King

MASTER:

Capt Robin B Keegan FRAeS

CLERK:

Paul J Tacon BA FCIS

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Except where specifically stated, none of the material in this issue is
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DIARY



Applications for Visits and Events

Details and application forms for Company events and visits are now available only online – either on the website or via links in the electronic newsletter and events bulletins. With the easing of Covid-19 restrictions, meetings are now held in-person unless otherwise notified.

OCTOBER 2022

3 rd	Company visit	Uxbridge bunker
5 th	Ladies visit	London Air Ambulance
13 th	GP&F	APH
23 rd	APFC End of Season Lunch	White Waltham
27 th	Trophies & Awards Banquet	Guildhall

NOVEMBER 2022

15 th	APBF	APH
17 th	GP&F	APH
17 th	Court	Cutlers' Hall

Cover photos: The Master's Tour - Harbour Air De Havilland Otter (The Master); Royal Aircraft Factory B.E.2 at Stow Maries (Vic Flinham)

Guidelines for submissions to Air Pilot

Please submit contributions as follows:

- Text in word document, including your name below the title of the piece;
- No embedded photos;
- All images to be sent as jpeg files with a file size of at least 2MB;
- Attachments totalling more than 15MB to be sent via WeTransfer only.



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A MESSAGE FROM YOUR EDITOR...



During the Covid-19 pandemic large numbers of commercial airline pilots left the profession and training of new ones effectively ceased. Now, as air travel recovers, there is a shortage of pilots – and not enough new ones being trained, not least because of the enormous, and rising, costs which put

that training beyond the resources of so many otherwise ideally-qualified candidates. One solution to all this should be the First Officer 'Trailblazer' Apprenticeship, where an airline selects suitable candidates, based on their aptitude and motivation rather than their financial status, and then pays for their training. This scheme, which covers all the knowledge, skills and behaviours required to become an aircraft First Officer, was developed by UK airlines and approved by Government in February 2019.

Most airlines are very keen to use the apprenticeship, as it promotes social mobility and opens a much wider pool of potential pilots, but are reluctant to pay all of the £100,000-140,000 needed – even though they could claim back up to £27,000 of their annual Apprenticeship Levy Tax for each apprentice trained. Department for Education (DfE) apprenticeship rules require that the apprentice does not contribute to any of the 'training' costs. As a result, the apprenticeship scheme has not been used by any airline in the last three years. Airlines have pulled no punches in explaining why and have proposed financial options for making it workable.

An associated problem is that there are no Civil Aviation Authority-approved training organisations on the DfE Register of Apprenticeship Training Providers (RoATP) – and as the regulator of pilot training, the CAA's approval is essential. Education and Skills Funding Agency (ESFA) rules state that a company wishing to use apprenticeships must complete a business case (including its planned number of apprenticeships starts and all start dates over the next 12 months) detailing a "gap in provision" and the name of its preferred training provider. Without a training provider on the RoATP and a resolution of the funding arrangements, airlines are unwilling to provide this level of detail.

Thus, the DfE, which is meant to be encouraging apprenticeships has, instead, created an unnecessary obstacle to them – and the industry and the would-be pilots it needs are the ones to suffer. It can only be hoped that the new Government will recognise the urgent need to knock the necessary heads together and get First Officer apprenticeships flying.

Allan Winn - Editor

IN THIS ISSUE...

NEWS

- 4 Trophies & Awards
- 5 Company visit: Stow Maries
- 6 The Summer Supper
- 7 Gazette



P6

REPORTS

- 8 The Master's Message
- 9 Regional reports
 - 9 Hong Kong
 - 10 North America
 - 12 Australia
 - 14 New Zealand
- 16 The Master's Tour Pt 1



P16

- 22 From the Desk of the DAA
- 24 The Youngest Circumnavigator
- 26 The Young Air Pilots
- 27 Schools Gliding
- 28 Flying at Treloar's
- 29 GASCo update
- 30 Promotions Team update
- 31 Book Reviews



NEWS ROUNDUP



TROPHIES AND AWARDS 2022

By The Editor

The Court has approved the following trophies and awards, which will be presented at the T&A Banquet at Guildhall on Thursday 27th October

For Outstanding Courage or Devotion to Duty in the Air

The Grand Master's Award: *Squadron Leader Mark Parker*

The Master's Commendation: *Major Terry Campbell*

The Master's Medal: *Zara Rutherford*

The Master's Medal: *Mack Rutherford*

The Hugh Gordon-Burge Memorial Award: *Crew of Air Astana Embraer 190*

The Prince Philip Helicopter Rescue Award: *Crew of Rescue 151*

The Barry Marsden Memorial Award: *442 Squadron Royal Canadian Air Force*

Flight Operations

The Sir Barnes Wallis Medal: *Squadron Leader Calum Law*

The Grand Master's Medal: *Travis Ludlow*

Thee Brackley Memorial Trophy: *Squadron Leader Richard Waller*

The Johnston Memorial Trophy: *RAF E-3D Sentry Force*

The Sword of Honour: *Robert Pooley*

The Myles Bickerton Trophy: *Steve Jones*

The Hanna Trophy: *Stuart Goldspink*

Flight Test

The Derry and Richards Memorial Medal: *Phillip O'Dell*

The Eric 'Winkle' Brown Memorial Trophy: *James Kromberg*

Safety and Survival

The Sir James Martin Award: *David Howson*

The Cumberbatch Trophy: *Dr Ratan Khatwa*

Training

The Glover Trophy: *Alexander El Khawaja*

The Central Flying School Trophy: *Master Aircrew Stephen Duncan*

The Pike Trophy: *Anthony Mollison*

John Landymore Trophy: *TBD*

For Services to the Company

The Sir Alan Cobham Memorial Award: *Peter Bugge*

Regional Awards

The Grand Master's Australian Medal: *Royal Australian Air Force Centenary Flypast Team*

The Australian Bi-Centennial Award: *Steve Padgett OAM*

MISFIRE

There was a mix-up in our report of the Inter-Livery Target Rifle Shoot (p9, Issue 52, August 2022), leading to the wrong photograph being used of the presentation of the Sniper Rifle Trophy to the Air Pilots team. The prizes were being presented by AVM Harvey Smyth as President of the RAF Small Arms Association. However, AVM Smyth was shooting as part of the Air Pilots team, and it was thought difficult for him to present a prize to himself so Grp Capt Andy Glazebrook, Chairman of the RAF Small Arms Association, stepped in and presented the prize to the Air Pilots. The correct photo is to the right.



The Air Pilots snipers: (L to R) Grp Captain Andy Glazebrook; Liveryman Colin Sach; Associate Matt Batlett; AVM Harvey Smyth

VISIT TO STOW MARIES GREAT WAR AERODROME

By Liveryman Vic Flintham

Eighteen members and guests enjoyed the hospitality of the staff and volunteers at this magnificent, if somewhat elusive, preserved Great War aerodrome on 5th August. (Some attendees appear to have underestimated the flight time, while for those driving the post-code got the better of the satnav!) The weather was perfect for our tour of accessible buildings and hangars, most ably and informatively conducted by Trevor, one of Stow Maries'



Company members view the memorial to World War I casualties

knowledgeable volunteers.

Stow Maries was one of a surprising 38 aerodromes and landing grounds constructed during the Great War in Essex. Remarkably, it survived pretty

much intact apart from the aeroplane sheds, and is without doubt the finest remaining World War I aerodrome in the world. Others in Essex included North Weald Bassett, Rochford (now Southend Airport) and Sutton's Farm (later RAF Hornchurch) but of their earliest origins nothing remains.

These Essex fields were almost all home to flights of 37 or 39 Home Defence squadrons, B Flight of the former being hosted at Stow Maries. Intended to defend against incursions by German Zeppelins and later Gotha bombers, the squadrons were mainly equipped with outdated Royal Aircraft Factory B.E.12 'fighters' which could be fitted with up to four machine guns or 10 Le Prieur rockets. The more usual fit was a fixed Vickers machine gun and a flexibly-mounted Lewis gun, but with



A selection of Company visiting aircraft

this armament and a full load of ammunition the B.E.12 took up to 40min to reach 10,000ft!

That the aerodrome has survived pretty much intact was due to the original farmers having bought the property back after the War and utilising the various buildings. Indeed, we were told that the farmer's children used the flooded ammunition store as a swimming pool. The farm was bought for commercial use in 2008 after which the

site was listed Grade II* and, on resale in 2013, bought by a charitable trust whose members are gradually bringing more buildings back to life. In the meantime those at risk are being protected while awaiting conservation.

One interesting aspect of Stow Maries is that it is also an important wildlife reserve with many native birds in residence, including famously, its owls and other raptors. An innovative approach to income generation is the inclusion of wildlife tours and photographic events from the woodland hides.

Highlights of our visit included the moving memorial to 10 based airmen who were killed, the excellent museum with informative and superbly arranged displays and the hangars which, although modern, are in keeping with, and on the site of, the original four aeroplane sheds. Inside the hangars was a mixture of old and modern aircraft, most in flying condition. These included replica Royal Aircraft Factory S.E.5A, Albatros DVa, B.E.2E and, in build, a Fokker DRI plus more modern types like a CZAW Sportcruiser, Steen Skybolt, Piper Cub and Auster Terrier.

A star among the aircraft on display was the civil-registered Avro 504K G-ABAA, a type that always reminds your scribe of an amusing acquisition. Around 1960 a friend at church offered free of charge a

wooden propellor from an aircraft 'shot down by her grandfather' in the Great War. It took two trolley buses from Willesden to Kew where the dusty 6ft chunk of mahogany was retrieved from under the stairs. The donor was most upset when asked if grandfather was a German, since the propellor was from a British Avro 504A!



The Avro 504K

(all pictures, Vic Flintham)

The Stow Maries aircraft started life as a service machine in 1920 serving with the RAF College as H2311. It was on parade at the RAF 50th Anniversary display at Abingdon in 1968, going to the RAF Museum in service colours, thence on loan to the Manchester Museum of Science and Industry and, when that closed the doors of its aerospace hall, to the current stewards.

After a look at vehicles in the MT sheds and perusal of the wares in the well-stocked shop it was off to the 'Mess' for an excellent lunch that would put many contracted-out service canteens to shame. Many thanks to the numerous volunteers who contributed so much to a memorable outing and to Graham Powell for organising the visit. □

SUMMER SUPPER 2022

By Upper Freeman Iain Ross

Thanks once again to Past Master Chris Ford's masterful organisation, 87 members and guests, minus a handful who were beaten by the heat, were able to enjoy a wonderful Summer Supper on 19th July. This one was probably a unique occasion, as it was held in Girdlers' Hall.



Girdlers' Hall

It is perhaps the most exclusive Hall in the City, very rarely open to other Livery Companies. We were extremely privileged that Chris had obtained the Girdlers' approval for us to be there.

The event was also unique in being held on the hottest day on record, and those in suits and ties envied those in light summer dresses. We were grateful to Chris for his announcement that we could take our jackets off for the meal, perhaps yet another unique event in the history of the Air Pilots.

A MODERN HALL ON AN ANCIENT SITE

The Girdlers have had a hall on this site since 1431, and this 1961 incarnation, refurbished and extended in 2008, has the appearance of an imposing English country house, most unusual in the area behind Guildhall. Previous halls had, like many others, been destroyed in the Great Fire and the Blitz.

The public front garden won a 2007 award for sustainability, and the enclosed rear garden is amazing, beautifully designed and maintained. Understandably the high temperature made it more sensible to have the reception in an air-conditioned room rather than in the delight of that private garden.

We were welcomed by the Girdlers' Beadle, Robert Young, ex-Scots Guards and Gulf War 1 veteran, who gave us a brief talk about the Girdlers and their hall. No microphone was needed for his parade-ground voice.

MAGIC CARPET

Apart from the Hall itself and the gardens, the other talking point is the Girdler's Mughal carpet, which a previous Master commissioned in 1630. It was used as a



The Girdlers' Mughal carpet of 1630

covering for the Court Room table, and in the Great Fire the Clerk removed it to his country house before the flames arrived. By 1898 it was so torn and ink-stained that it had to be cleaned and restored, work which was carried out by the Victoria & Albert Museum. In the Blitz the Master fortunately arranged for it to be stored in the vaults of the Westminster Bank, Lothbury, just a few weeks before the hall was destroyed. It is so spectacular that it was on loan for four months to New York's Museum of Metropolitan Art. It now lives in a hermetically sealed cabinet, so no more ink stains. What a sight indeed.

GRACE FOR AIR PILOTS SUMMER SUPPER AT GIRDLETS HALL, 19TH JULY 2022

*After Covid's delays and much rearranging,
Who could predict that the climate's changing
Would possibly threaten a heatwave to scupper
The long-awaited Summer Supper?*

*But Air Pilots are not deterred by the heat,
Especially when there is something to eat!
And as well as the food, some lovely chilled wine;
We're all perking up and feeling just fine!*

*So after difficult journeys with multiple hurdles,
At last we've arrived in the Hall of Girdles!
Once again able to shake hands, hug and kiss,
Those pesky masks and hand gels, we do not miss!*

*Let's then thank the Lord for all that he sends
And remember those passed and absent friends,
So before we begin happy chatter again,
Please join me in a resounding AMEN!*

Dorothy Saul-Pooley pm

Following Past Master Dorothy Saul-Pooley's wittily original Grace, as usual so perfectly matched to the occasion, there followed a delicious three-course dinner from Party Ingredients, the caterers for our Trophies and Awards Banquet. We've come to expect that they defy belief in their ability to produce such a splendid meal so promptly to everyone, so perfectly cooked, and so perfectly presented and served. They mightily impressed us again on this occasion

This was our tenth Summer Supper, all arranged by Chris, and everyone who attended appeared to enjoy it immensely. Those around me certainly did. Many thanks to Chris and The Worshipful Company of Girdlers for such a memorable evening.

SUPPER AFLOAT

For the 11th Summer Supper, on Tuesday 18 July 2023, Chris has booked the Court Room of The Honourable



Some diners braved the heat with jackets on...

Company of Master Mariners, HQS Wellington. The number of places available for this are more limited than for the halls which Chris has used for the recent Summer Suppers, so he advises members to register an interest early when the event is advertised by the Company.

Let me leave the last word with Chris: "It was just a wee bit hot on 19th July, but we Air Pilots are made of stern stuff. I'm so very pleased that those who did attend made such a great effort to be there, and I thank them for their support." □

GAZETTE

APPROVED BY THE COURT 22ND SEPTEMBER 2022

ADMISSIONS

As Upper Freeman

Nancy Susanne BINDER (OS)

Neil Martin CHEATLE (OS)
Christopher Benjamin CIRKO (HK)

Amanda HARRISON
Bryan Kelly ISON (NA)
Dale Andrew JOSEPH (HK)
Wayne Arthur LANG (OS)
Tyrell SIMPSON (HK)

Michiel SMIT (OS)
Jacobus Stefanus SWART (AUS)

Anthony Richard WADE
Etienne POTGIETER (OS)

As Freeman

James Frederick Jacobs HAMILTON
Sam JACOB
Wayne Bryan PRECIOUS
Thomas Charles RICH

Neil SCARBOROUGH
Tetyana SHEVCHENKO
Cheryl Leigh SIMPSON (AUS)

James David TAYLOR
Sammy Edward Omar VENABLES

As Associate

Scott Ashlie LEMMON
Kate Victoria Streten STEEL
Helen SUNDERLAND-COHEN

ACKNOWLEDGED BY THE COURT 22ND SEPTEMBER 2022

REINSTATEMENT

As Associate

Tony JOHNSON (AUS)

REGRADING

To Livery

Guy STORY
Kyle THOMAS
Jeff Richard CLEARY

As Upper Freeman

Neill CAUGHEY
David de KREMER
Gary JACKSON
Holly SIMS
Maikha LY (AUS)

DECEASED

With regret

Kevan John DEARMAN
Christopher FOYLE
George Alfred (Peter) LLOYD (AUS)
Douglas Frank ORCHARD

RESIGNATIONS

Saadeg ALDOULAH
Marcus ASHCROFT-HUGHES
John BARTLETT (NZ)
Alasdair BRAGGE
Michael CANORRO (NA)
Mark CHAPMAN (NA)
Jason CHEUNG
Lisa D'OLIVEIRA (NZ)
Christopher DUNCALF
Laura ELLIOTT

Bogdan FILIP (NA)
Alexander FRASER
Desmond GRANT (NZ)
Dominie HEALD
William HARDY
Nicholas HEARD
Giles HORNSEY
John KING (NZ)
Matthew STUBBS
Wing TANG
Giles TUPPER
Simon WILLIAMS

FORFEIT ALL BENEFITS

Maryse CARMICHAEL (NA)
Andrew HAMBLIN (NA)
Ronald MAK (NA)
Ian McFall (NA)
John SESSIONS (NA)



MASTER'S MESSAGE

By The Master, Capt Robin B Keegan

HER MAJESTY QUEEN ELIZABETH II

It was with the greatest sadness and regret that we received the news of the death of our Sovereign, Queen Elizabeth II on Thursday 8th September. We are not unique within the Livery movement in having a member of the Royal Family as our Grand Master or Patron, but we do

have a rather special connection in that Her Majesty had been both Grand Master and subsequently Patron of our Company during a period amounting to over 50 years in total. The Royal connection continued with His Royal Highness, The Prince Philip, Duke of Edinburgh, becoming Patron when the Queen



relinquished the role and, in turn now, we have her son His Majesty, King Charles III, as our Patron. It is very difficult adequately to express all our thoughts, feelings and memories and I'm sure many within our Company will have personal recollections as well, but I hope this short tribute

reflects how deeply we all feel about this sudden loss of a much loved and respected Monarch and supporter of our Company who was Grand Master 1946-53 and Patron 1953-2002.

Robin Keegan
Master



August is usually a quiet month so there is not so much to report especially as we have spent half the month in the USA and Canada on Part I of the Master's Tour. However, the two City appointments prior to our departure at the end of July

which are worthy of mention were the Armed Forces Flag Raising Ceremony in Guildhall Yard and the presentation of a new Standard to one of our affiliated units, No 601 (County of London) Squadron, Royal Auxiliary Air Force, held at the RAF Museum in Hendon.

The Armed Forces Flag Raising Ceremony has representatives from all the various branches of all three armed services present, but each year the Guard of Honour includes cadets from one of the services, and this year it was the turn of the Air Training Corps, with music from the Central Band of The Royal Air Force. The drill exhibited by the ATC cadets was exemplary, especially given that they were drawn from many different squadrons, but what was particularly pleasing for me was to meet a girl cadet from my old squadron, No 4F (Ilford). For those who don't know, the first 50 ATC Squadrons to be formed were given the 'F' suffix indicating that they

were the founder squadrons, so 4F was the fourth ATC unit to be formed back in the late 1930s and is still going strong today.

At the Ceremony for 601 Squadron, I met Natasha Seel. It transpires that one of her ancestors, Captain Edward Wakefield, invented the stepped float used by all floatplanes today and there is a project commemorating that which has built a replica of the aircraft on which he conducted his experiments and flown it from Lake Windermere in Cumbria. The aircraft is called *Waterbird* and I have put Natasha in touch with Allan Winn, our Editor, and hopefully an article on the project will appear in a future issue of *Air Pilot*.

Having returned from Montreal on 14th of August, we need now to start planning Part 2 of the Tour to Australia, New Zealand and Hong Kong this Autumn. That said, the ongoing Government extended quarantine requirements on arrival make it difficult to see how we can include Hong Kong in the Tour this year. Eileen and I have visited Hong Kong twice before including living there for a month over one Christmas and New Year period. It is one of our favourite places with a wonderful social life and we have always loved the time spent there so we will be very sad if we are unable to visit it this year. **Safe Aviating.** □



REGIONAL REPORTS

Hong Kong

By Hong Kong Region Chairman Liveryman Valerie Stait



The Hong Kong region continues to be quiet because of the many and continuing Covid-19 restrictions affecting our members, though we are working on taking advantage of restriction relaxations as they come. In the meantime, we are working with the Industry online. Lester Sly who manages our membership and administration attended the 55th meeting of the Hong Kong aviation services. As always, an enormous amount of work is in progress by the Hong Kong Observatory. As it will be the end of typhoon season in Hong Kong as you read this, hot topics this year included new equipment for detecting windshear at Hong Kong International Airport; dedicated forecasts for the new runway; and enhanced real-time information such as gusts, crosswind components and RVRs that are now updated every five seconds.

AUTONOMOUS AIR SERVICES

Another General Council member who has been busy in the background is our Head of Comms, Steven Cheung. I caught up with him about his project to develop air taxi services using autonomous (pilotless) drones. Though this sounds futuristic, there are already major players in this space in the US, Germany and China, including Airbus and Embraer. The whole industry is predicted by Morgan Stanley to be worth \$US1.5trillion by 2040, so it has huge potential. So much so that Steven has stopped flying to work on this project. He can see a full-on air taxi service by 2030. He thinks this kind of air taxi can transform major cities around the world. Since Covid-19, many workplaces no longer have the focus of a central office. People have the option of a better quality of life out of cities and even across borders with an air taxi service that allows them to hop in and out of urban areas.

There are high hopes for this technology. On the cargo side, drones could reduce traffic using city rooftops and so reducing congestion. One example is vaccination delivery, which could one day extend to using the drones for flying doctors. (Using the drone for Government services allows companies to prove the technology in real world situations before advancing to full passenger certification). The technology is in its early stages and drones would

be overseen by a pilot on the ground initially, but Steven explains that they eventually could be fully autonomous. As with any emerging technology, initial pricing will be high while the manufacturers recoup the costs of certification. However, Steven hopes that one day the service will build supply chains to remote areas and outlying islands, allowing cheaper living for poor and remote communities. This technology could be especially useful in disaster areas such as after earthquakes or typhoons as the drones can quickly access areas that take time for emergency services to get to. Although this is emerging technology (currently the drones fly for 20-30min), eventually the vision is to fly supplies in and casualties out to the nearest hospital.

BIG CHALLENGES

There are many challenges until we get to this point, of course. Currently, most drones are powered by batteries which have weight and endurance issues. What is unique about Steven's company is that it intends to use hydrogen technology. Collaborating with multinational companies, it has managed to overcome the challenges of storing hydrogen. Companies like Toyota are already using this and building hydrogen stations across Asia. Steven believes in hydrogen as a future fuel and a network of drone charging stations will form part of the infrastructure. Though its by-product of combustion is water, sourcing hydrogen still has a way to go to be environmentally viable. It is not a 'green' fuel but it is an alternative fuel that could be developed by taking advantage of solar and wind technology for generation. Whilst the more usual aviation issues such as traffic separation and wake turbulence are being worked out, cybersecurity and impact from noise are also subjects this area of the industry needs to address.



Pilotless deliveries may be the future (iStock)

Finally, Steven envisages an open-source air traffic control management system for lower air space in Asia, based on the more user-friendly European model of air traffic management. This would include geofencing political areas and more direct routings such as dedicated corridors. Although he acknowledges that the ideas may sound very futuristic to some, at the same time he thinks this technology has huge potential. Perhaps the future of this area of the industry is not as far away as we think. □



Regional Report: North America

By Regional Chairman Liveryman Simon Lawrence and Freeman Belinda Scott



While Europe and other areas of the world are considered the hub locations for soaring, the North American Region also contains a vibrant group of pilots who enjoy flying without engines. For this edition of *Air Pilot*, we thought an examination of soaring in North America might be of interest to those who haven't considered it. Obviously, in North America airlines and general aviation are the main aeronautical attractions; however, soaring has a strong contingent of diehard enthusiasts.

As for statistics, there are over 26,000 active glider pilots in the USA and over 5,000 in Canada. This works out to be roughly 28% of the world's glider pilots. The USA's Soaring Society of America (SSA) shows around 200 glider chapters, and Canadian statistics for 2021 show 831 Soaring Association of Canada (SAC) members distributed across 24 clubs. Canada in 2021 also reported more than 12,000 flights which was down from the pre-pandemic average of over 19,000.

The big problem for North America soaring is distance. Normally in soaring, distance is only an issue when related



Three Schweizer S 1-26s ready for launch at Merlin Soaring Association

to altitude! However, in the North American Region distance on the ground to the nearest soaring airport can be a major problem. The US land mass comprises approximately 3,537,455 miles² (9,526,468 km²). With close to 200 soaring locations, simple mathematics say there will be a location in the US only every 17,687 miles² (47,632 km²), which means the drive is going to be a long one! Meanwhile Canada, being slightly larger than the US

and containing only 13% of the US population numbers, makes access to soaring airports even more difficult. Realistically depending on your location in North America, relative to population centers, it can still be a 2–4h drive to reach a "local" soaring field. Despite the distance difficulty, soaring is very much alive, with the Soaring Society of America reporting over 10,000 members from the 26,000 US rated glider pilots.

CANADIAN GLIDING OPERATIONS

Gliding in Canada is organized mainly on a club basis, with a few commercial operations such as the Invermere Soaring Centre. As in most locations, clubs and commercial operations have their own requirements in terms of check flights, competency levels, etc, before pilots will be allowed to fly on their own. These requirements are obviously geared to safety considerations. The gliding clubs range from large well-equipped organizations, to operations with only a handful of members. The small and medium-sized operations tend to only fly on weekends and holidays, while the larger operations fly whenever weather permits. Some clubs will waive membership fees for pilots who are members of a club in their own country and who intend to be at the club for a only short time. Other locations have special rates for short stays of one or two weeks. As far as membership in the Soaring Association of Canada (SAC) is concerned, membership in a counterpart organization in their home country (for example, the SSA in the US, the FFW in France, the BGA in the United Kingdom, etc.) is taken as the equivalent of SAC membership while they are in Canada.

To get a grass roots view of soaring in the North America region we spoke with some clubs and members for their input. In Canada, gliding enthusiast and student Steve Sutherland started gliding on a whim one afternoon while travelling home from a vacation. "I just felt like it was something I really needed to do," he says. Sutherland timed his first lesson perfectly with optimal weather conditions. The afternoon winds increased and created lots of lift along the ridges of the surrounding mountains. "We got up to altitude so fast!" he recalls: "The instructor pilot was equally excited about the ease of lift, only requiring four passes to get to 6,000ft."

LOW PRICE

The appeal of gliding starts with the price. The lack of fuel required, other than for the initial tow, makes gliding the cheapest option in aviation. The initial tow averages less



One of the hangars at Merlin Soaring Association

than \$Can50 (£33) and most clubs don't charge an hourly rental, but rather a flat membership fee. Vancouver Soaring Club charges only \$Can1,500 (£990) for the season.

Aircraft ownership feels like it is within reach, as some quality gliders are priced as low as \$Can30,000 (£19,800). The wings fold off and the aircraft can be stored in trailers in driveways, instead of renting a hangar. An extra benefit comes from not having an engine to maintain.

Learning to glide can be done easily and quickly, with clubs offering one-to-two-week camps. "Gliding is a giant game of chess, looking for thermals for lift and finding enough for the return flight," says Sutherland. "You learn a lot about the weather and in places that don't have mountains that provide lift along ridges, such as the prairies, glider pilots can find cloud streets or a line of forming cumulus clouds so they can hop from one thermal lift to another."

From the safety perspective, we spoke with David Donaldson who is the National Safety Officer for SAC and also a gliding instructor at Great Lakes Gliding Club. According to Donaldson, the biggest myth that he would like to dispel is that: "Gliders are short sled rides that only happen around a glider port," he says. "Even in Southern Ontario, where I am based, we regularly have flights up to 8,000ft AGL that range for hundreds of kilometres. On a good day, a pilot will launch, take a tow to 2,000ft AGL, catch a thermal and climb to cloud base, then use that height to go somewhere, stopping periodically for lift. We use the lift to climb, then we use the height to fly some distance," Donaldson says. Some glider flights can be long, lasting up to even nine hours: "We regularly have pilots disappear for the day, returning four or five hours later," he says.

US GLIDING OPERATIONS

In the USA, the gliding organisation is similar to that in Canada, with clubs and commercial operators offering the soaring experience. A typical US club is Merlin Soaring Association (MSA) [where author Simon Lawrence is a member - *Ed*] located approximately 35 minutes southwest of Richmond, Virginia on the US East Coast. The Merlin field was built in 2000 and was purchased by "local Brit" Eric Lambert in 2018, while the club association was

established earlier in 2004. Eric began his gliding in 1968 in Sturgate, Gainsborough, in the UK, in a Slingsby T-31 and has been instrumental in developing the field and the club together. Membership has risen from 18 members in 2004 to over 50 today, with two covered hangars, 11 open hangars, 21 aircraft under roof and additional trailer space. The club has three aircraft for members to fly: Schweizer S 2-33 and S 1-26, and an IAR Lark. Additionally, the airport is a fly-in community with eight homes and numerous powered aircraft using a 3,200ft (975m) grass strip, along with a recently renovated clubhouse, for post-flight debriefs! Aerotows are provided by a Cessna C-150 with a 180hp engine and a Piper PA-25 Pawnee. Competitively, MSA ranks No 1 in the SSA Region 4 and 27th in the USA for the Online Contest (OLC) mileage with 22,000km flown as of August 22, 2022.

While getting young people interested in aviation these days is often a difficult task, MSA works with the Virginia Civil Air Patrol (CAP) to provide instructors for



Merlin field owner Eric Lambert's Schempp-Hirth Arcus

introductory rides to familiarize as many young cadets to soaring as possible, from throughout Virginia. With four instructors, Merlin provides a lot of smiles on any given Saturday when vans arrive with CAP students for their initial flights, in the CAP LET L-13 Blanik aircraft. Additionally, the club holds a 4th July picnic and a 5th November Guy Fawkes barbecue and bonfire to bring club members and guests together, while introducing the numerous aircraft on the field to the many young folks in attendance.

In some US locations, gliding fields are under extreme redevelopment pressure to be turned into condominiums and shopping malls, while others are struggling with membership numbers. Merlin has managed to expand by having the club members control both the club and the field, with a high level of participation and volunteerism to keep things progressing. Club members mow grass, clean and paint, as well as run ground operations for fellow pilots in addition to flying.

North American gliding is alive and well and if you're visiting the Region and want to spend some time soaring, perform a quick search of the web for a location nearby, but just remember to have plenty of gas in the car, as the trip can sometimes be a long one!



Regional Report: Australia

By Regional Chairman Liveryman Spencer Ferrier



Passing of George Alfred (Peter)

Lloyd: The Australian Region has been saddened by the departure of our oldest Member; the much-respected and long-serving Peter Lloyd, (so sub-named Peter by his mother, who said she had too many men named George in her family). Peter's funeral took

place at St Saviour's Anglican Cathedral, Goulburn in the diocese of Goulburn-Canberra ACT on 30th August. The splendid Cathedral was a fitting place to bid Peter farewell and the service was well and strongly attended by his many friends and connections. Australian aviation has thus bid farewell to one of its most outstanding advocates.

Peter's tireless work for air safety found its apogee in the Safe Skies Conference for which he was a driving force. Its biennial meetings in Canberra with the support of the whole of Government aviation administration marked the steady steps from aviation's adventurous beginnings to a reliable, public transport service.

I cannot let the moment pass without a salute to Jan Lloyd, Peter's wife of many years, whose care and support of Peter was and is an inspiration to us all.



The late Peter Lloyd with PM Colin Cox

50TH ANNIVERSARY OF THE 'ROULETTES'

The Royal Australian Air Force aerobatic display team, the Roulettes, celebrated turning 50 in fine style at RAAF Base East Sale on 2nd September. The various Covid-19 restrictions that have plagued Victoria meant that this event had to be postponed from 2020, so the team is in fact now closer to 52 years old.

Over 80 of the total of 206 pilots who have been part of the Roulettes were present at a celebratory dinner in

the Sergeants' Mess. Australian Region Council member, Upper Freeman Wg Cdr (ret) Roland 'Arnie' Morscheck, himself a former Roulette and former Commanding Officer of Central Flying School, presented a certificate of congratulations on behalf of the Air Pilots. This was accepted by the current Roulettes Leader, Sqn Ldr Mark 'Bundy' Keritz.



Arnie Morscheck (L) presents the Air Pilots certificate to Roulettes leader Mark Keritz

Earlier in the afternoon guests were treated to flying displays by the RAAF North American P-51 Mustang, a Pilatus PC-21 solo and, of course, the Roulettes themselves, who performed their full 'high show' to the great satisfaction of a particularly knowledgeable audience – no pressure!

The Roulettes are part of Central Flying School, which is an affiliated unit with the Air Pilots, Australian Region. Central Flying School will turn 110 next year, so expect more celebrations to follow.

The 5G Issue: as managed for us by Capt Brian Greeves, this continues to be a current matter. The issues are unresolved although the FAA declared in mid-June that there is a possible path for co-existence of the 5G Band in the vicinity of airports. This matter is far from concluded and Brian's close attention to the issue is much appreciated.

Capt P G Taylor's World War 2 Consolidated PBX Catalina, "Frigate Bird", the first aircraft to cross the South Pacific from Australia to Chile and return, is to be lowered from the ceiling at Sydney's Power House

Museum after more than 30 years in *situ*. This historic aircraft, donated by P G Taylor himself, is causing some concern, while the possibility of the Museum itself being moved to Parramatta remains as a background threat to the display as a whole. The Taylor family has expressed the preference for the Catalina to remain on its Sydney site.



The Roulettes prepare to display

Protecting General Aviation from within: In mid-August, on behalf of the Company, I attended at the invitation of Bathurst Aero Club through its Chair, Mr Ian Johnson, a meeting of Managers and Chairmen of several Central West regional Aero Clubs.

The meeting was held at Orange Aero Club to respond to immediate survival, financial and training issues. The dominant questions were the future of GA and training access to Bankstown Airport after airspace rules are applied concerning the new Badgery's Creek Airport [currently being constructed and scheduled to open in 2026 – Ed] which may render the existing Bankstown Airport (and thus Sydney), an inaccessible GA destination. Also called for was a stabilised State-wide set of airport occupation rules for GA, Flight Training and Maintenance. This would bring financial stability for such operations and provide a proper financial base for business. Strategies to increase retention of students were considered, to reduce from 80% the percentage of students annually who leave the industry after early training.

The Flying Training Schools and operators are now proceeding to prepare submissions on these and other issues, and intend to invite other regional groups to participate. The Royal Federation of Aero Clubs has expressed an active interest in these proceedings.

A Roadmap for RPAS and AAM (Advanced – or Urban – Air Mobility) sector aircraft. This document published by Australia's Civil Aviation Safety Administration (CASA) opens up extensive issues regarding aircraft



The Roulettes burst onto the scene



The RAAF's Mustang was a star (all Roulettes pictures Arnie Morscheck)

types, operations, licencing and associated issues for consideration and resolution. The 16-page publicity brochure sets out the CASA's forward plans. It is accessible at www.casa.gov.au/rpas-aam-roadmap. The Honourable Company will continue its interest in this innovative area of air navigation. □

Regional Report: New Zealand

By Liveryman Mike Zaytsoff, Technical Director, NZ Region



About 15 years ago, when I was based in Vancouver flying for Air Canada Express (operating under the trade name Jazz Aviation), I had the unexpected opportunity of being able to attend accident investigation training. That is because pilots at Jazz Aviation are members of the USA's Air Line Pilots Association (US-ALPA)

union, which put on these extensive and enlightening accident investigation courses. I asked for permission from the airline to attend this valuable training and thankfully my request was granted.

In the time since, I'm glad to report my services have never been called upon. As with any skill or training, however, it is important to maintain contacts in that field to keep up to date with the latest ways of doing things. To do that, I joined the International Society of Air Safety Investigators (ISASI). Like our Honourable Company, ISASI has regions around the world, only it refers to them as 'chapters' or 'national societies' instead. Now that I'm based in New Zealand, I attend meetings of the NZ national society. To my surprise, when it comes to challenges for the organization going forward, they are remarkably similar to the challenges which are facing the Honourable Company.

At the last general meeting of the NZ society, the outgoing President bluntly stated that membership numbers had been going down steadily for some time, and it is struggling to attract younger members. I was momentarily confused whether I was in a meeting of the Air Pilots NZ Region or a meeting of the NZ Society of Air Safety Investigators. I was also surprised by the President's frankness but reminded myself that's how safety investigators are. They tell the facts as they are, without sugar coating them, so they can be acted on. The outgoing leadership and the incoming leadership assembled informally once the meeting was adjourned to brainstorm ideas to address these problems. As we all know, sometimes it is the group huddle just after the meeting where the best work is done.

LEARNING FROM THE RAeS

In New Zealand, the Royal Aeronautical Society has jurisdiction over the aeronautical engineering profession. To maintain professional currency, members are required

to attend a monthly professional development webinar. These webinars are held at the same time and on the same day every month to assist with attendance. I brought this to the attention of those in the post-meeting group huddle and they agreed this could be a solution to our organization's problems. The lightbulb went off in my head that this could be a solution for the Air Pilots NZ Region's problems as well.

I told the group huddle that I was happy to take on the webinar project, with the condition that it be a joint venture with the Air Pilots NZ Region. Both organizations believe in advancing air safety from a non-political point of view, so chances are any guest speaker we invite would discuss a topic of interest to both memberships. I have learned that, while it is obvious that pilots like to hear from accident investigators, that interest does go in the other direction too. Accident investigators do like hearing from pilots, particularly if they are not pilots themselves, to help understand why pilots make the decisions they make. Both organizations in NZ also have around 40 members each, so it didn't make sense to run two separate webinars and ask a guest speaker to turn up twice to say the same thing.

A SUITABLE TIME TO TALK

We canvassed the memberships of both organizations for their preferred day of the week, and preferred week of the month. They responded with the second Wednesday of the month. The time of day somewhat set itself based on NZ's position on the Earth. A NZ time of 10:00 allowed us to get speakers from the UK between 21:00-23:00, most of Australia at 08:00, and USA Eastern Time between 16:00-18:00. Earlier or later than that compromised our ability to attract promising guest speakers. Or so I thought at the time, which shortly proved wrong. We have put on eight monthly webinars so far, and two of our guest speakers have come from Bahrain, where the webinar began locally at 01:00. Both gentlemen stoically began their presentations by stating that in their part of the world, many long-haul flights commence at that time of day, so they were used to being awake then.

They were Captain Amit Singh, who spoke to us in May about inattentional blindness and bias during a pilot's visual scan and Salah Mudara who spoke to us in August about the challenges of conducting accident investigations

involving multiple countries and multiple cultures. In the discussion that followed his presentation, the question arose of what to do if you encounter resistance to your safety suggestions. Or even worse, what happens if you make enemies from this work? Salah reminded us that is inevitable. You just have to keep going, even if you feel you are the only person on your side. If you believe you are doing what is right for advancing air safety, then you must just keep going and not give up.

Our webinar series kicked off in January with Bill Yearwood, the recently retired Manager of Aviation Accident Investigations with Canada's ICAO Annex 13



Retired Canadian investigator Bill Yearwood was the first seminar speaker (Qualatech)

accident investigation body (the Transportation Safety Board or TSB-C). I was so glad to get him as our inaugural speaker because as a former resident of that part of the world, any time there was an accident on Canada's West Coast, Bill was the face of the investigation. Following Bill was Eric West from the USA's FAA. He discussed his participation in the investigation following the tragic attacks on 11th September 2001. Midway through his investigation, Eric was called away to investigate the mysterious loss of control accident involving an American Airlines Airbus A300, also in New York City. Eric discussed how he was able to rapidly change his mentality from investigating a criminal act into investigating the more traditional unintentional accident.

In March we had Domenico Lombardo, recently retired from the Australian Department of Defence. More specifically Dom worked for the Department's Defence Science and Technology Group, which has an accident investigation function. Dom participated in the investigation of the sad loss of a Royal Australian Navy Westland Sea King helicopter in Indonesia in 2005. In April our guest speaker was Capt Jeffery Ang, an advocate for pilots' mental health based in Singapore. It's great to see people like Capt Ang tackling this difficult but necessary topic. As mentioned earlier, in May our guest speaker was Captain Amit Singh discussing inattentional blindness during visual approaches. It was a very timely topic in this part of the world as our accident investigation body (the Transport Accident Investigation Commission or TAIC) had recently released its final report into the near-midair collision of two turboprop aircraft on approach into Wellington. One crew had misidentified the traffic it was supposed to follow, but as with any accident or near

accident, there were many contributing factors. Thankfully the TCAS on both aircraft averted the possible collision.

NEW YORK IS NOT NECESSARILY NEW YORK!

In June our guest speaker was Kyle Szary, an Air Traffic



Air NZ's Boeing 787s will be following Boston's directions when flying into New York (Air NZ)

Controller in Boston Center in the USA. What some of us did not know - but soon learned - is that it is not New York Center that controls traffic into New York City's three major airports, but Boston and Washington Centers instead. This was timely knowledge, as Air New Zealand is planning to begin direct flights from New Zealand to New York's Kennedy Airport in a few months' time. Kyle briefed our pilots for the unique Canarsie VOR Approach to runways 13L and 13R at Kennedy Airport. While this will not be news to Air Pilots used to crossing the Atlantic Ocean, it certainly was news to Air Pilots who will soon be coming across via the Pacific Ocean!

Last, but certainly not least, in the list is my Air Pilots counterpart for the Hong Kong Region, Technical Chair (and now Regional Chair) Capt Valerie Stait, who kindly brought a whole team of speakers to our July webinar.

They talked to us about PhD research being conducted at Cranfield University in the UK on what was the latest thinking for the Just Culture mentality. They discussed how at their airline they conduct an Operational Learning Review, a way of examining flights for everything that went RIGHT, instead of how we too often focus on everything that went WRONG.

Of all the things I have learned from organizing this webinar series, it is how kind and generous our fellow aviation professionals around the world are in donating their time to help make us better at what we do. When I began, I irrationally feared that we would run out of speakers and/or few people would want to help us. Little did I know that we would be able to attract so many accomplished, talented, and well-informed individuals who kindly share their time and wisdom with us. □



Near miss on visual approach illustrates issues covered in Capt Amit Singh's seminar in May



MASTER'S TOUR REPORT, PART 1

By The Master, Capt Robin B Keegan



This year's Master's Tour – the first for three years, as a result of the Covid-19 pandemic – is taking place in two parts. Here, the Master reports on Part One, to North America, in July and August.

The Master's Tour is primarily a business trip combined with the opportunity to meet the Company members in our overseas branches. Because of Covid-19 the Company had lost many of the technical and legislative contacts we enjoyed previously, so a principal part of the objective this year was to refresh or replace those lost contacts and find potential new ones. In addition, there was quite a number of technical topics that I was requested to raise in the relevant meetings which included the following:

- Changing from magnetic to true north;
- Lithium-ion battery fires;
- 5G mobile phone networks and their effects on radio altimeters;
- Flight time limitations;
- Fatigue and FRMS;
- Initial type certification and subsequent aircraft types 50 years later;
- RPAS/EVTOL and urban air mobility;
- Satellite-based ADS-B;
- Single pilot operation and extended range operations;
- Skill fade;
- Pilot training standards and automation;
- Lack of aircraft system knowledge,
- Fitness to operate;
- GNSS vulnerability to jamming;
- Open crew reporting and human factors.



Outside view of the Army & Navy Club in Washington

WASHINGTON DC

We flew from Heathrow with United Airlines and were met on arrival at Dulles Airport by Liveryman Capt William (Bill) Pinney who kindly drove us to The Army and Navy Club, which has a reciprocal arrangement with the

RAF Club in London. The Army and Navy Club is very centrally located in Washington DC and only a short walk from the White House and other national monuments. The Club has a charming, slightly colonial feel to it, and we spent the remainder of the day there including a brief afternoon walk to explore the local area.



With Bill Pinney at the Udvar-Hazy Centre

On day two, although we were still somewhat jetlagged, Bill came back to take us to the Udvar-Hazy Centre, also known as the Smithsonian Air and Space Museum at Dulles Airport. Bill is not only a Captain with Netjets but also is a part time docent or guide at the museum, and therefore has a wealth of knowledge about the exhibits, so we could not have had a better person to accompany us. The museum has a fabulous collection of many unique aircraft and spacecraft including the Boeing B-29 Superfortress *Enola Gay* and the Space Shuttle *Discovery*.

Technical co-operation

Day three saw us also meet up with Liveryman Capt Simon Lawrence, current chair of the North American Region, and we started the day with a visit to the Radio Technical Commission for Aeronautics (RTCA). This is a membership-based organisation that also works in conjunction with EUROCAE (the European Organisation for Civil Aviation Equipment) in Paris. We were given a warm welcome and hopefully we can benefit from future technical co-operation, although we have yet to negotiate the membership fee! The afternoon visit was to the MITRE IDEA Laboratory, Transport Innovation Centre. This conducts research on behalf of organisations such as the Federal Aviation Administration (FAA) and has a number of aircraft simulators. It occasionally requires pilot volunteers for its various projects, which could usefully involve some of our North American members. That evening Eileen and I hosted Bill and Simon to dinner as a small thank-you for all their help.

Day four saw a visit to David Burkholder, Deputy Executive Director of the FAA and some of his staff. The

FAA had requested advance notice of the agenda items and fielded nine of its specialists, either in person or via Zoom, to answer our questions - including Liveryman Kathy Abbott, which was very helpful in not having to explain in too much detail what a City of London Livery Company is! The one area where we were unsuccessful was in visiting the National Transport Safety Board (NTSB) but, unfortunately, it seems all the relevant NTSB people had gone to the Experimental Aircraft Association's AirVenture show at Oshkosh for the duration.

Following a final lunch together, we said goodbye to Bill and Simon and spent the remainder of the afternoon walking around many of the Washington landmarks such as the White House, the Lincoln Memorial, the Washington Monument and the Vietnam Memorial Wall, which was very moving. There are no real skyscrapers in central Washington, unlike in New York. Most buildings seem to be no higher than about 10 storeys, but all the public buildings have a massive 'solidity' to them, presumably designed to echo the power of the United States.

However, the heat and humidity in Washington in July can be very oppressive so we were pleased when we finally got back to the air-conditioned sanctuary of the Army and Navy Club. Being due to move on the next day to Mobile, Alabama (another hot and humid destination) we discovered the one downside to staying at the Club: looking forward to breakfast before our flight, we discovered that the Club does not serve breakfast on a Saturday and, as it is in the business district, virtually all the nearby cafes and restaurants are closed too.

We were travelling to the Airbus Final Assembly Line facility located on the Mobile Regional Airport, Alabama at the personal invitation of Liveryman Capt Mark McCullins, who is the Chief Test Pilot there. Mark's family were originally from Northern Ireland but emigrated to Canada when he was a small boy. Mobile Regional Airport was originally Bates Army Airfield and is still a US Coastguard training base. However, our flight took us on American Airlines from Washington Ronald Reagan National Airport to Pensacola in Florida. This might seem somewhat perverse, but there are virtually no flight connections to Mobile Regional Airport as yet, and Pensacola is just over the State border from Alabama.

Mark kindly met us at Pensacola and drove us the one-hour journey to the Hampton Inn in Fairhope which is a charming small town on the coast with a village type of atmosphere. That evening Mark invited us to his family home where we sat outside having dinner by their pool with his wife Kathryn and daughter Kali. Mark has yet to be 'clothed' as a Liveryman, but I am hoping he will be able to attend the Trophies and Awards Banquet later

this month so that I may have the pleasure of doing so personally.

MOBILE Alabama

Our first full day in Mobile was a Sunday, and Mark had invited us to spend it on his boat cruising around Mobile Bay, including seeing the Middle Bay Lighthouse which, although no longer manned, has managed to survive storms and hurricanes for 120 years on what seem to be quite spindly foundations. Apart from the shipping channel, the Bay is only about 12ft (3.7m) deep because of silt accumulated over the years, which might account for the lighthouse's longevity. Dinner that night was in the Yacht Club where Mark keeps his boat.



Middle Bay Lighthouse in Mobile Bay

Day two, after a comprehensive briefing, centred on a



Fairhope Yacht Club

flight in the cockpit jump-seat of a brand-new Airbus A320neo on a customer acceptance flight for Frontier Airlines. Frontier names all its aircraft after animals, and this was *Nevada Red Fox* with a picture of a fox painted on the fin and rudder. As a long-time Boeing pilot, I found this a fascinating experience, especially as part of the flight test profile required a 30° nose up and 15° nose down pitch attitude, not something you see in everyday normal airline operation! However, it was explained that the Airbus Normal Law characteristics only allow a maximum of +2.5g when pitching nose up and a maximum of -0.5g when pitching nose down, however hard you move the sidestick, so the whole exercise was not as dramatic as it sounds. There were well over 30 different exercises in the acceptance flight, testing high and low-speed flight plus many of the aircraft systems and at altitudes up to 39,000 ft. My thanks to Captain Jorge Escalante from Airbus and Captain Mark Kershner from Frontier who invited me along for the ride.

The USA has an organisation called the Civil Air Patrol (CAP) which has some similarities to our Air Training

Corps but is much better funded. CAP Squadrons can be for adults only or combined units which include teenagers. Mark is a Captain in the Mobile Combined CAP Squadron and had asked me to give a talk to the cadets in his squadron which I was delighted to do. Each CAP Squadron is provided by the USAF with an aircraft and associated running costs, usually something like a Cessna 175 or 182. These aircraft are used occasionally for search and rescue operations or anti-smuggling spotter patrols. Mark subsequently commented that he had not seen the cadets as attentive for a long time, although I'm not so sure if that is a good or a bad indication about my presentation style.

Massive in Mobile

Day two involved a tour of the Airbus facility. It has two massive hangars plus many ancillary buildings, all fully air-conditioned. One hangar is used for the A320 production line and the other for A220 production. The A220 is an interesting aircraft, originally designed by Bombardier



Flightworks in Mobile

with five-abreast passenger seating, a nose profile similar to a Boeing 787, and one of the most futuristic-looking cockpit displays I have ever seen. Mark is hoping soon to get the go-ahead from Airbus to build a third large hangar for another production line, for an Airbus type yet to be determined.

Airbus components arrive every week by ship from Hamburg for the A320 and usually by road or rail for the A220. Airbus Alabama is now the third or fourth largest aircraft manufacturing plant in the Western world and growing bigger. The investment involved has been massive, and given that Alabama is the 49th poorest State of the USA, the people of Mobile seem extremely grateful for the career opportunities that it has created. That evening, Eileen and I hosted Mark and Kathryn to a thank-you dinner in a restaurant at Point Clear.

Day three included a visit to Flight Works at the Mobile Regional Airport. This is an amazing facility of 15,000ft² originally sponsored by Airbus and designed by the 'Imagineers' from Disney World but now also supported by many other companies including Pratt & Whitney, Safran and Snap-On Tools. Its twin roles are as a visitor education centre and as a source of inspiration for those contemplating a career in aviation or other STEM-related professions. It uses many advanced techniques in the various public displays, including virtual reality headsets, plus it has a number of extremely well-equipped workshops featuring things like 3D printers which allow students to design a project on the workshop computers and then use the printers to produce their design. In

addition, Flight Works in conjunction with Snap-On Tools has produced a very large "We Build It" kit of projects, together with the tools necessary to complete them, which can be rolled out to schools across the country, again giving students hands-on experience and acting as a source of inspiration.

A diesel future?

Mark had organised a visit to the production facility of Continental Aerospace Technologies (now Chinese-owned), also located on Mobile Airport, by way of a bonus. Many in the light aircraft world will be very familiar with the Continental horizontally-opposed air-cooled engines, the design of which seems to have changed very little over the years. The biggest change comes in production techniques, with the use of massive computer-controlled milling machines producing quite complex components at an astonishing pace. Interestingly, Continental is now building diesel engines for light aircraft. These engines have the ability to run on Jet A-1 although currently, they are only manufactured at the Continental plant in Germany. *[Continental acquired the Thielert business which originally based its light aircraft diesel engines on four-cylinder Mercedes-Benz car engines, and now builds in-line and horizontally-opposed four-cylinder and vee-6 diesel engines – Ed]*

On the way back to the hotel we passed the site of the proposed new passenger terminal at Mobile Regional Airport. The hope is that on its completion, airlines will start to run flights direct to Mobile rather than passengers having to route via Pensacola, which would suit Airbus particularly well.

Day four was our next travel day and again, Mark drove us to Pensacola Airport with a short stop *en route* to look at the local alligators. This time we were heading for Vancouver in Canada, but routing via Chicago with United Airlines as there were no direct flights available. This required a four-hour stop in Chicago for the connecting flight, but we used the time to have dinner as US internal flights tend not to serve food any more. Including a delay to our connecting flight, we arrived at the hotel in Vancouver at around midnight local time, which was 02:00 Alabama time. Masks are no longer required on internal flights in the USA, but Canada still has compulsory mask wearing as an anti-Covid-19 measure, so whilst United did not require us to wear masks on the flight to Chicago, we were obliged to wear them on the flight from Chicago to Vancouver.

VANCOUVER British Columbia

On day one, we met Liveryman Capt Alistair Beaton for breakfast in our hotel. Alistair was the previous Chair of the North American Region, and was to cover many,



Sky Helicopters Jet Ranger

through Vancouver before heading off to Pitt Meadows Regional Airport. What was advertised as a visit/tour to Sky Helicopters rapidly turned into a flight in a Bell Jet Ranger helicopter courtesy of Clayton Reid, the President and Chief Pilot who flew us up into the mountains just to the North of the airfield for one of the most spectacular scenic tours



View from the Jet Ranger



Another view from the helicopter tour

imaginable. Sky Helicopters is very versatile and not only offers various helicopter services but also rents out its hangar for weddings and other functions. Unsurprisingly, *Forbes Travel Magazine* has ranked Sky Helicopters as one of the top ten Aerial Adventures in the World. [See a profile in Issue 47, October 2021 – Ed] Our second visit at Pitt Meadows Airport was to the relatively new Vancouver Aviation College where Alistair and Upper Freeman Captain Bruce Lothian are both instructors. It is obvious that no expense has been spared in equipping the College building, which houses a Boeing 737-800NG fixed base simulator; and whose opening ceremony was held on 22nd May 2022. The College plans to offer a number of courses from PPL up to and including ATPL licence standard. The Principal of the College is Captain Mostafa Khosrowtaj, who used to be the Chief Pilot of Iran Air, and we had some really interesting discussions, particularly about how our Company runs the Aptitude Assessment days in the UK for those contemplating spending a lot of money to achieve a frozen ATPL qualification. Finally, we



Vancouver Aviation College, with Alistair Beaton (2nd left), Capt Mostafa Khosrowtaj (3rd left), Bruce Lothian (2nd right)

many miles over the next few days driving us around Vancouver and surrounding areas. Alistair then took us on a brief sightseeing drive

were entertained to a BBQ lunch which included many delicious Iranian specialties.

An afternoon at Abbotsford

Our third visit of the day was to the Air Show at Abbotsford Airport in the Fraser Valley, approximately 42 miles from our hotel. The Abbotsford Air Show, sometimes known as the Canadian National Air Show, was celebrating its 60th anniversary this year. The show runs over three days starting on Friday but the first day is an afternoon-into-evening event, as a number of the displays require darkness in order to see them at their best advantage. The first of these was Nathan Hammond in his de Havilland Super Chipmunk *Ghost Writer*, covered in LED lights which change colour, and the aircraft carries some 200lb (91kg) of pyrotechnics creating a spectacular nighttime aerobatic display albeit one in which the aircraft appears to be on fire! The second was the North Star Drone Show.

This was a first for us, and uses a considerable number of carbon fibre UVify IFO swarming lightshow drones, each complete with an 840-lumen light and choreographed in an ever-changing display of light colours and shapes and, in this performance, replicating the profiles of many of the aircraft which had appeared at Abbotsford over the years, plus a Smiley face. Perhaps the most mesmerising part for me was when the drones all made a simultaneous vertical take-off in a large flat square formation and hovered in front of the crowd line with no discernible noise. The evening ended with spectacular fireworks display before Alistair drove us back to our hotel.

Day two was a Saturday and we had kindly been given two complimentary tickets by Elysia Dziwenka at Harbour Air to take the 30-minute seaplane ride in a de Havilland



Harbour Air Turbine Otter

Turbine Otter floatplane from Vancouver South Terminal in Richmond to Victoria Harbour on Vancouver Island and return later in the day. This must be one of the most beautiful seaplane rides, as it skirts the US Border whilst passing hundreds of smaller islands on the way. The weather was brilliant with clear blue skies, a gentle breeze and daytime temperatures of around 28°C, which did make a pleasant change from the heat and humidity of both Washington and Alabama.

We had been told that one of the highlights in Victoria

was afternoon tea in the Empress Hotel which overlooks the harbour. As it was a Saturday morning, we went straight from the aircraft to the hotel on the other side of



Victoria Harbour on Vancouver Island

the road to enquire about afternoon tea vacancies, of which there were none – but they could, however, take us straight away - so we had 'Morning Tea' instead. Fortunately,

we had missed breakfast that morning! Well, not wishing to miss this once-in-a lifetime opportunity, it had to be done and the experience is almost pure theatre with good food thrown in but at some considerable cost!

On day three, Sunday, it was back to Abbotsford for the daytime air show, again kindly hosted by Alistair Beaton, this time in the President's Enclosure together with Alistair's wife Diane. We shared a table with Upper Freeman Bruce Lothian and Freeman



Taxi out at Victoria Harbour

Belinda Scott, and also met Steve Stewart who is an ex-pat now living in Canada and is one of the Directors of the Abbotsford Air Show. Much to the crowd's disappointment, the Royal Canadian Air Force Aerobatic



Abbotsford Air Show Presidents Enclosure: Alistair Beaton, Bruce Lothian, The Master, Belinda Scott, The Mistress, Diane Beaton

Team, the Snowbirds, had been grounded due to technical problems but the USAF Thunderbirds did their best to make up for the absence of the 'home team' by putting on a splendid extended and very noisy display in their Lockheed Martin F-16s. Once again Alistair kindly drove



The Company Staff Car with Alistair Beaton

us back to our hotel in preparation for a very early departure for Ottawa the next morning.

OTTAWA Ontario

Although Canada is the second biggest country in the world, it still seems surprising that it takes 4½h to fly from Vancouver to Ottawa - not including the extra excitement of an unscheduled missed approach at the destination due to poor weather, the first on our Tour. We were met on arrival by Upper Freeman Geoff Lowe, a captain with Cougar Helicopters, who acted as our 'host' for this section of the Tour and drove us to The Lord Elgin Hotel in the city centre. The Canadian requirement for mandatory mask wearing meant that we had to use them whenever entering any Government building or moving around therein, but they could be removed once in a meeting room provided that all participants agreed, and social distancing could be maintained.

Day two started with a meeting with Major General Colin Keiver, Deputy Chief of the Air Staff, Royal Canadian Air Force (RCAF) who made us very welcome. It transpired that Colin, in the earlier part of their respective Air Force careers, was an RCAF contemporary of Mark McCullins, who had hosted our visit to Airbus, proving once again that aviation can be quite a small world. The RCAF uses the same battery of tests for aircrew aptitude assessment as does RAF Cranwell, and Colin was very interested in the work of our Company in offering an unbiased evaluation of pilot aptitude using some of the test facilities at Cranwell. He could see that there could be some potential synergies if a similar system was introduced in Canada using volunteer North American Company members to undertake the debriefing task. The main obstacle would appear to be the distances involved, as the RCAF testing facility was located only at the Canadian Forces Base Trenton, although Major General Keiver did wonder if the tests could be made more widely available.



Ottawa Fireworks

However, he was delighted to learn that 442 Transport & Rescue Squadron RCAF would be presented with the Barry Marsden Memorial Award at the forthcoming Trophies and Awards Banquet.

The afternoon visit was a joint meeting with Transport Canada, headed by Patrick Juneau who is the Director of Aviation Safety Policy and Intelligence, and various members of Nav Canada staff. Transport Canada is the Canadian Government Department and Nav Canada is now a privatised body running Canadian air traffic services in a similar way to NATS in the UK. That evening, Geoff and his wife Linda had invited us to a delicious dinner at

their home which treated us to a lovely break from hotel-style food.

Safety similarities

Day three saw a visit to the Canadian Transport Safety Board (TSB) and another warm Canadian welcome from Natacha van Themsche, the Director of Air Investigations, and Board Member Paul Dittmann. The TSB uses very similar principles and practices to our own UK AAIB, except that it is also responsible for investigating accidents in the maritime, rail and pipeline transport areas. The final Ottawa visit was to the College of Professional Pilots of Canada, and a meeting with the Executive Director Mark Buzan. This is an enthusiastic embryonic organisation that has some similarities to our Company, but has ambitions to be more like the Legal or Medical professions which include licencing and disciplinary processes for their members. Currently with approximately 200 members out of a total of 68,546 licensed Canadian pilots (of all types), it would appear that it still has some way to go. Ottawa stages a *Son et Lumière*-style show on Monday and Tuesday nights outside some of the principal Government buildings, but because of heavy rain we decided not to go. On Wednesday evening, with much better weather, we went for an evening stroll and saw large numbers of people heading towards vantage points overlooking the river. We followed them and were able to witness a fantastic firework display which lasted for over 25min. The next day we travelled by train from Ottawa to Montreal for the final two visits on this part of the Tour. As the train journey only takes two hours, we had been previously advised by Past Master Malcolm White that it was not worth travelling by air.

MONTREAL Quebec

Whilst Montreal is the second most populous city in Canada, it is largely built on an island. On arrival at the station in Montreal, we were pleasantly surprised that our choice of hotel was situated on the other side of the road to the station exit which was very convenient. There were no Company members available in Montreal, but I had previously contacted Carole Couchman whom I had met originally 22 years ago during my time as an IFALPA Director, although at that time IFALPA was based in Chertsey in Surrey. Subsequently, IFALPA had relocated offices to Montreal to make for greater co-operation with the International Civil Aviation Organisation (ICAO). Carole decided to move with IFALPA and has subsequently become a Canadian citizen. She has just retired as the IFALPA representative to ICAO, but took us to the offices of IFALPA where we met Christoph Schewe, the Managing Director who I hope will be a new contact for the Company. Carole kindly offered to show us some of the sights of Montreal or *Mon Ree-all* as it

appears to be pronounced by many of the locals. The Old Port area has some lovely old buildings and is largely pedestrianised with many tempting-looking restaurants.

Day two saw our planned visit to the International Civil Aviation Organisation. ICAO is a branch of the United Nations, and its employees enjoy diplomatic status. The appointment was with Capt Miguel Marin who is currently the Chief, Operational Safety, Air Navigation Bureau. I had previously met Miguel at an IFALPA Annual Conference in Mexico City in 2008, so yet another small world. He was very receptive to our input although he admitted he had never heard of the Honourable Company of Air Pilots before. Hopefully, another new contact for the Company!



At ICAO Montreal with Miguel Marin

Our flight home to Heathrow the following day with Air Canada was delayed slightly by shortage of crew so the current problems in the airline world

following Covid-19 seem to be universal. Masks still had to be worn inflight even though we were leaving Canada rather than entering.

Conclusions

The message that came through fairly clearly on the Tour is that there is a number of organisations in the USA and Canada which offer similar or better attractions to potential Company members. If we wish to attract a wider membership group, it would be helpful to start offering PPL or Gliding Scholarships as we do in the UK. That, of course, costs money, but I am hopeful that the plans that Assistant Mark Tousey has to attract charitable donations in North America will start to redress that balance over time.

Overall, the Tour had gone to schedule with all planned meetings carried out. However, none of this would have happened without the help and co-operation of our local members plus the extensive coordination effort provided by Donna Farquhar, our North American Region administrator. Sadly, we were unable to meet Donna in Vancouver as she was away attending a family wedding. So finally, massive thanks to Donna Farquhar, Bill Pinney, Simon Lawrence, Mark and Kathryn McCullins, Alistair and Diane Beaton, Bruce Lothian, Geoff and Linda Lowe, Jeremy Tracy and all the various Government, military and other officers and officials we met, too numerous to mention. All the updated contact details we gained on the Tour have been passed on to our DAA Nick Goodwyn and Court Assistant Captain Ed Pooley who chairs our Civil Air Transport Safety Network. □

FROM THE DESK OF THE DAA

By DAA, Nick Goodwyn PM



At the end of August, the Government launched an independent review of the UK's Civil Aviation Authority (CAA). The aim of the review is stated as being to ensure the provision of world leading regulation and public services for decades to come.

The remit of the review includes everything from ensuring the highest standards of aviation safety and security, to the efficient use of airspace, space operations and protecting consumer rights. In the launch statement, the Government sees the CAA as vital to the UK's position as a world leader in aviation and aerospace.

The UK regulator is to be reviewed as part of a wider government programme looking into the effectiveness and efficiency of public bodies. At the time of writing, it had not been announced who or which body was conducting the work.

REVIEW TOPICS

The review will focus on: "The efficiency and effectiveness of the CAA in delivering its services currently, and for the future. Its role, form, function and delivery



The CAA is under review (CAA)

model, the corporate governance and assurance mechanisms underpinning the organisation and the CAA's relationship with the Department for

Transport (DfT) and how the two organisations work together to deliver a quality service for the UK. It will assess how its priorities match up to the Government's wider objectives, taking into consideration its role as an independent regulator." It is hoped that there will be the opportunity for independent bodies such as the Air Pilots to be able to contribute through consultation in some way.

Coinciding as it does with the CAA's 50th birthday, the review will no doubt assess its performance against the 22-point plan to tackle disruption in the aviation sector on recovery from the Covid-19 pandemic that DfT and the CAA published in June 2022. Of particular note in the recovery plan were five specific expectations of the commercial aviation sector to deliver a successful summer return to operations, which were that:

- summer schedules must be reviewed to make sure they are deliverable;
- everyone from ground handlers to air traffic control must collaborate on resilience planning;
- passengers must be promptly informed of their consumer rights when things go wrong and – if necessary – compensation in good time;
- disabled and less mobile passengers must be given assistance they require;
- safety and security must never be compromised.

Whilst the widespread disruption reported across the media in early July has subsided, it is believed that passenger confidence remains variable and an assessment of how those high-level expectations were met will be received with interest.

PROMOTING CAREERS AND SKILLS

Other elements of the 22-point plan of interest to the Air Pilots were:

- The launch of a *Generation Aviation* campaign, working with industry to promote awareness of aviation careers and increase the number of people applying for jobs in the sector; DfT working with the CAA to launch a £700,000 skills funding competition this autumn to support outreach across the sector and raise awareness of aviation careers to young people.
- The launch of the Aviation Skills Recruitment Platform (ASRP) (which predated the announcement by a significant period of time) to support skills retention and recruitment in the sector. The Air Pilots supported this initiative and as such is listed as an 'interested party'. Also listed was the building of partnerships with colleges and universities aiming to ensure students are attracted to and prepared for a career in aviation – and in support of this, DfT has launched the Talent Aviation Platform to connect students to aviation sector employers.

On this last point, perhaps the DfT could be even more minded to consider the outstanding contribution of PM Roger Gault (as reported to the ACEC) and his tireless work on the First Officer pilot apprenticeship.

The 22-point plan also stated that the DfT is working with the Department for Work and Pensions to promote aviation roles and recruitment via job centres and training for jobs coaches, and that the DfT was delivering its

Reach for the Sky outreach programme, supported by its Aviation Ambassadors to promote diversity, inclusion and accessibility in the sector.

UK NOT ALONE

The DfT noted that the aviation sector's issues were not confined to the UK, that disruption is happening across the EU and in the USA due to staff shortages, and that the government was committed to building a robust and dependable domestic aviation industry, launching the ASRP to help develop and hold onto UK workers. It was interesting that it noted that similar schemes in other sectors experiencing shortages, such as the HGV sector, have not been widely used and have not significantly contributed towards a solution. However, it concluded that the government has taken action to support the industry, so now the sector itself: "...needs to take the appropriate steps to ensuring they deliver realistic summer schedules, work together as an ecosystem, and put the consumer first".

The review of the CAA comes at a crucial time for the aviation industry as it continues its recovery from the Covid-19 pandemic and will also run in parallel, but entirely separate to, the International Civil Aviation Organisation safety audit due to take place in Q3-4 of 2022. The ICAO audit is the first for the UK since separation from EASA after the withdrawal from the European Union. Whilst the government review timeline and final report timing are not confirmed it is expected by the end of the year, as is the completion of the ICAO audit. We will be keeping a close watch on both and offer any input we can to the CAA review through the contacts we have. With that in mind I was able to speak with the Group Director SARG (Safety and Regulation Group) at the CAA at Gatwick in early September to that effect.

ARTEMIS TROUBLES

On a separate and very different note, I have been following - as I am sure have others - the attempt to launch the Artemis Space Rocket and the beginning of the return to the moon and moon landing programme. As someone who was woken up very early on 16th July 1969 to watch the first moon landing, and who had the



The Artemis project: stuck on the launchpad? (iStock)

fortune to listen to Commander Neil Armstrong speak at the T&A Banquet some years ago, this captured my imagination. My thanks to Liveryman John Tribe for regular updates and the Florida SPACErePORT for highlighting progress (and the challenges of the attempted first launch delay).

The Artemis program is a robotic

and human Moon exploration program led by the United States' National Aeronautics and Space Administration (NASA) with three partner agencies: European Space Agency, Japan Aerospace Exploration Agency, and Canadian Space Agency. The Programme, a series of Space Launch Systems (SLS), will run through Artemis I-VIII. The first uncrewed test mission is designed to prove that the Space Launch System rocket and the Orion capsule can safely carry future astronauts to the Moon. NASA flight controllers halted the first launch attempt after they were unable to verify that one of the SLS rocket's four main engines (engine no 3) had been properly cooled to a temperature of -420°F (-251°C) prior to ignition. The engines must be chilled to very cold temperatures to handle the injection of very cold liquid hydrogen and oxygen propellants.

About 2½h before its planned launch, NASA scrubbed its second attempt to launch the Artemis I SLS rocket. A stubborn hydrogen leak associated with the rocket's launch pad supply line interface could not be fixed despite multiple attempts during the fuelling process. NASA announced it would not schedule another launch attempt until late September or October, depending on the complexity of the fix.

DIFFICULT CHOICES

The extremely difficult choice faced by NASA right now is in part the consequence of how the space agency manages its development programs. This test flight has to succeed because NASA just doesn't have extra SLS rockets or spacecraft kicking around, and because this rocket can only be loaded and fuelled so many times. The consequence of waiting two years before another test flight and four years before astronauts could launch, all while other systems progress, make this more than a 'test flight' in the usual sense.

While NASA is not sure when the Artemis I SLS rocket will be ready again for a launch attempt, it is looking at four possible periods over the next four months, although NASA officials have said they are tentatively planning SLS launch attempts on 23rd and 27th September. That schedule first depends on work to replace seals in two liquid hydrogen lines that connect to the rocket's core stage that suffered leaks in the cancelled launch attempts.. NASA is still in discussions about a waiver for the rocket's flight termination system to allow those launch attempts without having to roll the rocket back to the Vehicle Assembly Building for a check on that system's batteries. No doubt that the world is watching this programme and we hope for a successful launch and mission as this edition goes to press. □

THE YOUNGEST CIRCUMNAVIGATOR

By The Editor



The youngest circumnavigator, ready for ocean crossings

On 24th August Associate Mack Rutherford became the youngest pilot ever to have flown solo around the world, and the youngest to do it in a microlight aircraft. In taking that title from the previous record-holder – Associate Travis Ludlow, who completed his circumnavigation in 2021 – Mack was also emulating his

elder sister Zara, who remains the youngest female round-the-world pilot (see *Air Pilot* Issue 49, February 2022). A few days after he completed his flight, Mack and Zara spoke to The Editor.

Mack's flight took a total of five months and one day (142 days), of which two months were actual flying, and the rest of the time taken up with various weather and other hold-ups. Interestingly, although the routes which the two siblings took on their respective flights differed in direction, Zara's total elapsed time on her circumnavigation was just one day longer than Mack's.

Like Zara, Mack flew a Shark Aero Shark UL microlight, with the flight beginning and ending at Sofia in Bulgaria, the home of sponsor ICDSOFT: while she flew west, he flew east. To satisfy Guinness World Record requirements,



Mack's Shark UL – a long-legged microlight

he had to visit one pair of antipodals (points diametrically perfectly opposite to each other on the globe). His first antipodal was a point near Rodrigues Island (Madagascar) in the Indian Ocean, reached on 27th May; the second, Isla Socorro (Mexico), he visited on 9th August.

His actual flying time came to a total of 221h, covering



One of Mack's antipodal points was in Mexico

29,225nm, around two thirds of which was over land, covering 30 countries. It involved 68 take-offs and landings, with the longest flight being Japan to the USA, which took 10h, over water. "Unlike Zara, I couldn't fly over Russia, because my aircraft is French-registered," he says.

THE LONGEST LEG

That longest leg actually ended on the uninhabited island of Attu, in the Aleutians off the coast of Alaska, where Mack landed in the dark, in rain: fortunately, there is an abandoned US Coast Guard base at Casco Cove on Attu, with a good runway, and a hut in which he slept for the night. (Attu and its neighbour Kiska were the only part of the USA to be invaded by Japan in World War II, being under Japanese occupation from June 1942 until being retaken by the Americans in July 1943.) From there the following day he was able to fly the short distance to nearby Shemya Island, where there is a staffed US airbase with fuel and food.

That 10h flight was more than the maximum official endurance of the Shark, which has standard fuel tankage of 100l in the wings, augmented in Mack's machine by a further 94l tank in a turtleback. While Mack was in South



Casco Cove, the bleak end of a 10h flight

Korea he had two extra 25l cans plumbed into the Shark's fuel system, with the result that even after the 10h flight he still had 2h worth of fuel on board when he had to land at Attu. The effect on the Shark's performance was, he says: "Definitely quite long on take-off..."

Fuel was obviously a major consideration on the flight: Mack says that the most fuel-efficient cruise speed for the Shark is 125kt, and that Mogas is better for its 100HP (75kW) Rotax 912 engine than Avgas which can, he says, can be difficult to get in many parts of the world. One, perhaps surprising, aspect to fuelling was the generosity which he encountered in some places: although he was paying for fuel by card "...and occasionally in cash", in some unexpected places like Sudan and Kenya he was given fuel free of charge: "In a lot of these places they are very kind," Mack says.

Zara adds that the reliability of the Rotax engine was a big factor on both flights: "I only added oil twice in my entire trip, with a filter change every 30h" – a praise backed up by Mack, who says that he had no problems with the engine itself, only with the fuel system supplying it.

A LIFELONG INTEREST

Coming from a committed aviation family, Mack has been around aircraft all his life. The first time he took the controls of an aircraft was, he says, when he was about seven years old: "At that point I was quite scared, but I came to enjoy it," and by 14 he had started working towards his licence. He now has some 300h up in total – over two-thirds of them accumulated on his round-the-world flight.

The biggest challenge he encountered was, he says, the 10h flight from Japan to Attu: "There was so much planning involved," he says. That was far from the only challenge he faced, however: over the Egyptian Sahara the pump for the extra fuel tank stopped working because of the altitude at which he was flying. "The Egyptians don't allow flight lower than that over their territory," he says, so he was having to fly at 8,500ft which, in the heat of the area, gave a density altitude of 11,500ft. It wasn't until he crossed into The Sudan that he was able to reduce his altitude, and the pump started working again.

That wasn't the full extent of the challenges: approaching Khartoum he encountered "...terrible visibility because of all the sand and pollution", and low cloud in Kenya and Madagascar. The delays in his flights meant he encountered the monsoon season in India, Pakistan and South-East Asia, and storms in Mexico.

His crossing of the Atlantic (in three stages – Goose Bay in Newfoundland to Narsarsuaq in Greenland, then to Reykjavik in Iceland and on to Wick in Scotland) came with its own problems, especially low cloud and strong



Atlantic stopover – Narsarsuaq in Greenland

winds. He started that crossing at 5,500ft but at times was down to just 500ft – shades of Alcock and Brown's transatlantic crossing back in 1919.

HIGHLIGHTS

What had been the highlight(s) of the voyage? "There wasn't a single greatest moment," says Mack, although that flight from Japan to Attu was a significant one. "It had been impossible for me to imagine crossing the Pacific until I did it." To get that far, he had already become the first to fly a foreign microlight through Japan itself, although the Japanese had allowed Zara to fly 15 miles inside their airspace (but not over land) to avoid North Korea on her flight: "I'd rather annoy the Japanese than the North Koreans!" she says.

Although Mack was flying solo in the Shark, he's keen to acknowledge the support he had from his back-up team, especially Associate Megan Bowden, who was handling paperwork and permits ("...the flying part") from the UK, and Jacek Lawrecki from Poland handling press. Mack's family was, naturally, on hand, with Zara monitoring progress during the day and their parents at night: "The one time I stayed up all night was for the flight to Attu," she says.



Diversions to reach chosen antipodal points show up clearly on the flightpath (all pictures MackSolo.com)

Mack is clear on what he wanted to achieve with his flight: "I'm trying to show that young people can make a difference." He says: "You don't have to be 18, or to wait until you've left school: you can make a difference if you follow your dreams now." His personal goals do not, however, include any more record-breaking in the near future: he has returned to school to finish his A levels for now, but is aiming for: "...an aviation career, definitely, perhaps in the RAF, but I'm not certain yet." □

REPORT: YOUNG AIR PILOTS

By Young Air Pilots Chairman, Freeman Dom Registe



The Honourable Company of Air Pilots has quietly, but effectively, underpinned all that is good in aviation for generations of aviators, and will continue to do so for generations to come. Routinely adding to the 'gene-pool' and supporting those entering the industry is paramount, and perhaps the most tangible of these

efforts is the Company's scholarships programme. Recent months have afforded me the pleasure of visiting some of this year's gliding scholars at their respective bases and witnessing them in action first-hand.

After a rigorous selection process, and interview day at Air Pilots House, successful gliding candidates become scholars and are then grouped and assigned to one of several preselected airfields across the UK, where they will undergo their training. Conducted over a one-week residential course, the scholarship has the ability to take someone with little or no flying experience to first solo, weather permitting. With much to learn and achieve in a relatively short period of time, a gliding scholar's workload is challenging and visiting company members, including me, were most looking forward to seeing the scholars in an active flying environment.

ENTHUSIASM

We were greeted with copious amounts of enthusiasm, and listening to just how much each scholar had gained from their course was a common theme, yet one that we most certainly never got tired of hearing. In addition to the technical aspects of the flight that were acquired, it was wonderful to hear how important and prevalent teamwork was during every phase of the course and the bonds that were created directly as a result.

Perhaps the most challenging aspect to replicate on page was the sheer sense of enjoyment exhibited by those under training. Regardless of flight hours amassed, number of aircraft flown and places visited, I think it's safe to say we all still remember standing at an airfield after our first flight knowing we've just accomplished something extraordinary but, more importantly, knowing we *have* to do it again. It was incredible to witness the same moment for the next generation of aviators, all of which would not have been possible were it not for the benevolence of The

Honourable Company of Air Pilots. With all scholarship flying concluded by the time this issue appears, work is no doubt underway to reflect, plan and prepare for next year's window of applications.

THANKS TO COMPANY VISITORS

I am in the fortunate position of being able to openly thank The Master and every single Company member who set aside the time to visit our scholars at airfields across the country over the summer (eight members, who between them visited scholars at four airfields). The feedback I have had from scholars was of great appreciation and that, unquestionably, the visits had enhanced what was already an incredible experience for them all.

In addition to visiting our scholars during the summer season, numerous opportunities exist throughout the year to positively impact the next generation of youth in



PM Cliff Spink with two gliding scholars at Cambridge Gliding Centre

aviation. Should any Company member wish to become involved, please do not hesitate to get in contact.

It is also the ideal moment to remind all members of our upcoming pilot aptitude testing days, which will be conducted on 25th October and 1st December 2022 at Air Pilots House. The day is open to all members and non-members who are thinking about embarking on a career in aviation, so do please feel free to pass the information on to anyone beyond reach of *Air Pilot* who would benefit from the opportunity.

Managed by a team of experienced aviation professionals and recruiters, the day is also very much open to those with licences wishing to prepare for upcoming selection and assessment days: naturally, your day at Air Pilots House will be tailored to suit. For more information or to enrol, please contact office@airpilots.org. □

AIR PILOTS SCHOOLS GLIDING SCHEME 2022

By Assistant Zoë Gell



The Air Pilots Schools Gliding Scheme is the highlight of the year in many school calendars, and another cohort of secondary school pupils has taken to the skies this summer under the watchful supervision of their flying

instructors at the Cambridge Gliding Centre and the London Gliding Club at Dunstable.

The gliding days commenced in May at Cambridge Gliding Centre, where each student was treated to a trial flight in a twin-seat glider. Soaring through the skies above Gransden Lodge was described by one pupil as: "The most exhilarating thing I have ever done!" More schools visited Cambridge in June during a week of scorching weather to experience gliding. This time, they were also treated to vintage aircraft fly-ins, and Liveryman Martin Blaze's Stearman and Past Master John Towell's Tiger Moth provided a source of fascination for the students and instructors alike. Thanks to Past Master Cliff Spink and 2021 PPL scholarship winner Tyler McGregor for also visiting Cambridge to talk to the students during their visit. The gliding days are a wonderful way to introduce



A City of London Academy student relishes his first flight (COLA)
young people to aviation, as well as immerse them in an environment where they can grow in confidence talking to experienced aviators and keen volunteers and experience many new challenges.

The third group of schools visited the London Gliding Centre at Dunstable in July. This time, Past Master Dr Michael Fopp was on hand to talk to the students about gliding, aviation in general and the Honourable Company. Some impressive questions were posed by the students, including by one intrepid youngster who quizzed the gliding staff on Principles of Flight before getting airborne!

The commitment shown by both the students and their schools is admirable. Each school has a considerable journey to the gliding centre, with some groups making their way across London for several hours to reach their nominated club. Often, these youngsters will never have left London before, so the trip is as exciting as it is daunting. Nevertheless, they all pluck up the courage to take part in an activity totally out of their comfort zone and the impact on them afterwards cannot be overestimated.

A note from King Ethelbert School in Kent says: "Our students had a fantastic day. From the minute we arrived they were engaged and fascinated by the environment and the staff at the gliding club. The instructors judged the students well and seemed to tailor the flights to suit each one's level of comfort with flying. Without exception they all left the airfield buzzing. Yet another fantastic and inspiring gliding trip. Thank you."

As always, the gliding days this summer have thrilled and inspired the youngsters who took part; they will



Students and their instructors at London Gliding Club, Dunstable (COLA)

no doubt be encouraging others from their schools to apply to go gliding next year. Schools and parents have described how some students overcame real issues with confidence and in their lives generally; a clear indication of how a simple trip in a glider can impact a young person in such a hugely positive manner. The gliding instructors were complimented on how well they engaged with the students, putting them at ease and tailoring each flight to the individual. A busy summer and another successful schools gliding programme was ably summed up by two students from Hampstead School: "The best day of my life," and "I have just one word – 'grateful'".

Plans are already underway for next summer and expressions of interest from schools are welcome. Please contact the office if you know of a school who may wish to take part. □

TRELOAR STUDENTS TAKE TO THE SKIES

By Nicola Doran, Livery Relationship Manager, Treloar's

It is with our most sincere thanks to the Honourable Company of Air Pilots for their funding back in 2019 that our students were able to take to the skies after a very long wait brought on by the pandemic. We hope you enjoy reading this report and as you can see from the smiles on the students' faces how fantastic an experience you have given to some very special individuals.

Every student at Treloar's [a special education school and college – Ed] is given the opportunity to understand their choices and opportunities for living, learning, working and socialising. Students are encouraged to push themselves towards their individual goals and Treloar's is committed to creating an aspirational environment to help them achieve their goals.

Extra-curricular activities play an important part in the life of our students and everyone who wants to, no matter how complex their disabilities, is given the opportunity to participate. Trying new experiences such as flying gives our young people an amazing boost to their confidence, self-esteem and physical well-being.

It is thanks to your support that we were able to provide some of our students with the opportunity to handle the controls of a plane in the air, whilst others could experience what it would be like to fly a plane through the flight simulator. These are once-in-a-lifetime experiences for the students. As Oscar, a Student Governor, says: "For me Treloar's is a place where people like me are encouraged to reach their full potential and where they're allowed to be who they want to be. Furthermore, it's a place where we're respected, have fun and are treated like family"



The Treloar team at Blackbushe (Treloar)

of simulator flights, offering our students one-on-one coaching as they each took to the skies.

Using the flight simulator meant that all our students, regardless of their age or medical condition, could enjoy

THE JOY OF FLYING

It is important to continue to provide enriching and stimulating experiences for our students. Aerobility, the leading charity in disabled aviation in the UK was warmly greeted at Treloar's for two days

the exhilarating feeling of flying a plane. Each student had the chance to take off, fly through the skies and attempt a tricky landing, whilst the Aerobility team gave them expert advice on technique and tailored the experience to each person's needs.

WE HAVE TAKE OFF!

We couldn't have hoped for a better day for our budding young pilots. Two College and two School students had the most exhilarating day at Blackbushe Airport with Aerobility, taking control of the plane and flying in near perfect conditions with barely a cloud in the sky. They each took off and landed the plane and one student discovered a passion for turning left!

Prior to taking control of the plane, however, our students were taken through the experience of check-in and moving to the departure lounge. This may seem a trivial part of the day, but to our students who had not flown before this made for a completely inclusive experience. It is fantastic to work with partners like Aerobility to help us enrich our curriculum as we strive together towards shared goals of removing barriers for young disabled people. We are truly grateful to The Honourable Company of Air Pilots for providing such a great experience for our students to actively participate in.



Students try the simulator (Treloar)

Treloar's School and Treloar's College offer a specialist environment where learning takes place alongside therapy and care. We are proud to say we are experts in our field, giving our young people the emotional, physical, clinical and educational support that their physical conditions with complex needs require.

Every student is given the opportunity to understand their choices and opportunities for living, learning, working and socialising beyond Treloar's. They are encouraged to push themselves towards their individual goals and Treloar's is committed to creating an aspirational environment to help them achieve their goals.

Your support really does ensure our students continue to thrive. Over the past year our generous donors have helped us purchase specialist equipment such as adapted baths, physiotherapy equipment and make bespoke adaptations to wheelchairs. □

GASCO UPDATE

By Upper Freeman Stephen Hayman



The 2022 AGM and a Council Meeting of the General Aviation Safety Council (GASCo) were held in the Air Accident Investigation Branch (AAIB) headquarters at Farnborough on 26th July. Because of a restriction on the maximum number of guests it was a so-called hybrid

meeting, with many attending online via a MS Teams link.

It was good to learn that the designated Low Flying Area frequency (130.490) is working well and has already saved what might have been a mid-air incident. There are, however, line-of-sight communication problems because of terrain - how low is "low"?! Alarming figures from the CAA showed that there were 620 low-flying infringements in the first six months of this year. Some of these involved visitors from Europe who do not have the same rules as we do. The ages of the miscreants ranged from 17 to 92 years!! One particular hot spot is the Manchester low-level corridor. The rules for this route have changed recently, and this is now a mandatory 'squawk and listen' route. If you do not comply, that is an infringement!!



AAIB hosted the GASCo AGM

The number of fatal accidents is down, but so is the amount of flying – and a visit to the AAIB hangars certainly focuses the mind. Modern technology, with the help of iPads/Sky Demon/Sky Echo ADS-B/Bluetooth etc, is a great aid to navigating and traffic awareness. However, there are aircraft out there which either do not have transponders, or whose pilots are deliberately turning them off. Yes, you heard right! The message was clear that we must continue to Look Out, and not get embroiled

in or distracted by these devices. It was a case of back to basics, and airmanship, along with the reminder that pilots need a map in case a device's battery goes flat or the device fails in some other way!

There was a request from glider sites that other aircraft fly well clear of these airfields. Although the aeronautical maps show the maximum launch heights, glider pilots tend to use the speed at release to gain a few more feet. Also, aerotowing may continue to a higher level than the maximum indicated launch height. There is a reminder that in the summer months glider sites are busy sometimes seven days a week - just look on Flight Radar 24 on a nice sunny day for confirmation.

Also, the Private Flyer shows held this year will no longer have runway closures to facilitate motoring activities on the runway as happened this year at Wycombe. Imagine, closing the runway of an airfield for two or three hours on an air show day!

Despite losing the CAA contract to conduct Safety Seminars, GASCo continues to run evening safety meetings up and down the country. There are not as many as there were before the Covid-19 pandemic, however, but to find the nearest, please visit the GASCo web site (www.gasco.org.uk). Also, GASCo continues to run seminars and webinars, and to attend outside events such as at the recent LAA Popham event held on 3rd -5th September. For those who missed the Met Office visit or ditching courses there will be more in the coming months. GASCo is continuing to do a sterling job promoting flight safety for general aviation. It is a charity and welcomes donations to be able to continue its work. □



How low is "low"? Infringements remain an issue (A Winn)

REPORT: PROMOTIONS TEAM

By Assistant Steve Durrell



As I'm sure you are all aware, our promotions team has worked for many years to showcase the Company and all its fantastic work at airshows, pilot recruitment events, and educational outreach days (to name a few). The downtime that the recent Covid-19 pandemic enforced on us has allowed the

team to regroup, re-assess, and relaunch a more up-to-date stand, bringing a renewed professional shine to our presentation.



Upper Freeman Glen Fricker oversees a Livery Schools session at the Guildhall

A good number of events and visits were successfully completed during 2021, whilst complying with the remaining restrictions, and thankfully this year has allowed us to push the thrust levers further forward as the airshow circuit came alive again. The shows at RAF Cosford, Duxford and Farnborough all produced huge attendances, with a real sense of optimism and energy among the attendees, who'd been deprived of air shows for so long. At those events we were visited by Air Cadets and prospective career pilots, as well scores of youngsters seeking inspiration and guidance.



A radio-controlled model teaches control surfaces basics

ANNUAL EVENTS

Three of our regular annual events are the Pilot Careers Live (PCL) in November and April, held at Heathrow, and the Livery Schools Guildhall Showcase in June. The PCL events in November 2021 and April 2022 were very



University Air Squadron members learn the ropes at Duxford

well attended, with around 1,000 tickets sold for each event and a high number of talented and enthusiastic individuals seeking our advice. The Guildhall Showcase has always been a great opportunity to introduce the younger generation to aviation and inspire interest. This year was no exception, with our stand having a constant queue of youngsters eager to try their hand on the computers, having first learned the operation of the control surfaces from the large radio-controlled model on the stand.

This year has also seen the start of a rolling outreach programme to the RAF Air Cadets, with us going direct to individual Squadrons. We are now providing guest



Assistant Steve Durrell and Freeman Will Wright hard at work at a careers fair

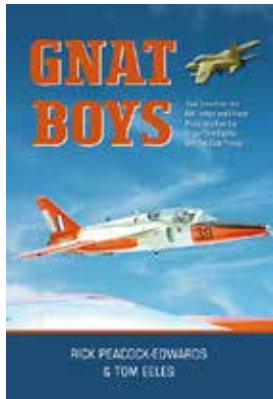
speakers (our volunteer members) with a comprehensive Powerpoint designed to introduce the Air Pilots and offer inspiration and guidance along with information about our scholarships.

We are looking to add more volunteers for future events so if you would like to join in the fun with the promotions team, contact me at steve.durrell@yahoo.com □

BOOK REVIEWS

GNAT BOYS, BY PM RICK PEACOCK-EDWARDS & LIVERYMAN TOM EELES

Reviewed by PM Peter Benn



In 1/72 scale I remember the Folland Gnat represented poor value for money as an Airfix kit – it was tiny. In 72/72 scale its diminutive size represented agility and relative cheapness. From the drawing board of Teddy Petter at Folland Aircraft, the Midge and the very similar Gnat were conceived as low-cost fighters. But in the mid-

Fifties the Air Ministry realised it need a more advanced trainer to replace the Meteor and Vampire, and to prepare student pilots for the mighty Lightning. The two-seat Gnat T1 trainer entered RAF service in 1962.

So, given the type's antiquity, the volume's editors - Past Master Rick Peacock Edwards and Liveryman Tom Eeles - have done a great and timely job in assembling tales from those who flew the 'pocket rocket'.

After a good foreword by the distinguished ACM Sir Richard Johns (himself the author of a good Grub Street memoir *Bolts from the Blue*), Tom launches into an excellent overview of the type's gestation and development (helped no doubt by his knowledge of Westland & Petter through studying his father's work on the Whirlwind fighter).

Stretching the Gnat to create the trainer version introduced a longitudinal stability problem. The Folland fix was to introduce a datum shift link, which automatically adjusted the incidence of the tailplane when the undercarriage was lowered or retracted. If hydraulic power was lost however, the tailplane had to be shifted into the correct position before the power disappeared entirely, and then fore-and-aft control was by the standby trim tabs.

Folland under Petter was akin to Lotus Cars under Colin Chapman, whose mantra was: "*Simplify, and add lightness*". Another of Petter's tricks was to dispense with airbrakes for this slippery machine, and use the undercarriage doors instead. Its diminutive size meant that larger/taller pilots could not exercise full aileron control! Derek Bryant's first tale of undercarriage accidents is well told.

UNSERVICEABILITY

A recurring theme of the book is unserviceability issues – particularly in the early days as it was introduced into RAF service, and then again towards the end of its service life when spares availability was an issue. RAF Valley was clearly the scene of too many accidents and ejections.

Every (pilot) contributor comments on the excitement of flying such a small and agile machine. Tom likened it to "*riding a witch's broomstick*" (because of the long pitot tube extending from the nose). With barely positive stability in most axes, the Gnat was unsurprisingly not a great platform for instrument flying, and several contributors, including Boz Robinson, comment on the satisfaction from doing recoveries in IMC from high level, often in formation, and also the great skills of the air traffickers at Valley. In doing so they were frequently busting Air Staff rules on flying minima in order to guarantee requested student throughput. The story of a pilotless Gnat making a perfect forced landing at Llanbedr is arresting.

The Gnat's low-aspect-ratio, highly-swept, wing provided a sparkling roll rate, so much so that this had to be artificially restricted by a fuse in the aileron circuit limiting it to 360°/sec! Otherwise, the fin would part company. When later in use with the Red Arrows, there was some judicious fiddling with this fuse.

Al Pollock, he of Hunter-through-Tower-Bridge fame, explains how formation aerobatics in the Gnat started, with a terrific photo as proof, before Boscombe had officially cleared the type for such activity. The Yellowjacks were formed, and this team in turn morphed into the Red Arrows. John Dickson was the only RN officer at 4 Sqn, Kemble, and relates a very funny story about a dining-in night there and some 'crimson crabs'. Geoff Brindle's tale of the unconscious fireman will appeal to anyone with a sense of humour as childish as mine!

The creation of the Red Arrows, as told by Roy Sommerville, makes for great reading, and a description of a display from the back seat is well written by Tom Thomas. Brian Hoskins captained the team for the last Gnat season, and remarked that it had much better throttle response than the Hawk (though it is not clear whether this refers to before or after BAe made a special tweak to the response of the Rolls-Royce Adours in the Reds' machines).

COMBAT TALES

It adds greatly to the book to hear from the Finns and Indians – the two countries who used the Gnat as a

fighter. The Finnish contributions are translated a little too literally perhaps, and lack the colour that one would expect from a RAF pilot. They are Finnish, in other words. Their training had hitherto been on Fouga Magisters – quite a transition. One shortcoming became evident at a weapons range – a Finnish pilot was fragged by his own cannon! The gun mountings in such a small aircraft were located next to his thighs – not ideal in case of a malfunction. The Indians, on the other hand, convey well the sense of excitement in taking the Gnat to war – as they were in aerial combat with Pakistani North American F-86 Sabres. These dogfight tales are a valuable addition to the canon of cannon era air combat.

Stan Hodgkins (familiar to many Company members through our visits to his ex-place of employment, Martin Baker) gives a good exposition of the Gnat's foibles and its utilisation in the civilian world. Mark Fitzgerald follows with a good insight into displaying the Gnat in the modern age. Arguably Stan's contribution would have been better at the beginning – his exposition of the STUPRECC drills for hydraulic emergencies is better than most.

REPETITION

One of this book's flaws is that there is too much repetition – STUPRECC drills and longitudinal stability issues being the most obvious cases. There are several contributions (particularly in the middle section) that add little and are very repetitive. *Gnat Boys* could have done with some heavier editing: indeed, the editors should have spared a moment to think of the narrative through the eyes of the reader. It is all very well contacting one's chums for their recollections, but their responses should not guarantee an automatic place in the volume. As well as too much duplication, there are several typos to keep the reader alert.

In conclusion, as Brian Grant says: "*It is a wonderful aircraft... It was too good for students!*" The editors have created a volume which does some justice to the Gnat's place in aviation history.

Gnat Boys, by Rick Peacock-Edwards and Tom Eeles: hardback, 254pp; published by Grub Street, 4 Rainham Close, London SW11 6SS, www.grubstreet.co.uk; £25.00 □

SKY TALK 2, BY LIVERYMAN PHIL HOGGE

Reviewed by PM Chris Hodgkinson

This second volume of short stories by Phil Hogge again uses aviation as a background theme for most of the 17 stories. They are varied in geographic locations and subject matter, ranging from the details of a Boeing 747 test flight following deep maintenance/major overhaul, to spreading the ashes of a former colleague at 35,000ft in mid-Atlantic and a military charter to the Falkland Islands after the 1982 war. Those who have retired from the Boeing 707 and 747 and Vickers VC10 fleets will have their memories jogged by the geographic descriptions.

Having started making model aircraft, like many a budding pilot, Phil spent a lifetime in commercial aviation with BOAC, which later became British Airways. Trained at the College of Air Training in Hamble on its very first course, he flew on the Bristol Britannia, VC10, 707 and both variants of the 747. Initially he was a navigator on the Britannia then converted to the VC10 as a pilot. Much of his career was as a 'Management Pilot', where he frequently had to deal with personal problems. Having been a Training Manager on both the 707 and 747, he became the General Manager Flight Operational Services in the Flight Operations Department. On retirement from BA he was appointed as IATA's Director, Operations and Infrastructure. Some of the resulting themes which he

experienced in these varied positions are vividly illustrated in his stories.

Anyone who has held a management role will know that there can be a thin dividing line between being too censorious or too easy-going: having to decide if a pilot's reactions in a particular situation were due to a lack of piloting ability, or the difficulty of coping with the situation. Phil had the rare ability not to judge pilots unreasonably while not tolerating any foolish actions. This ensured maximum safety across the fleet because the pilots trusted him.

All in all, this is an enjoyable read and, while the author only uses real names very occasionally, those who flew the VC10 and 747 will no doubt be able to recognise at least one or two of his characters. This volume follows the similar successful format of Volume 1 published in 2020, and Phil has generously donated the royalties from both books to the Flying Scholarships Fund of the Honourable Company of Air Pilots.

Sky Talk 2, by Phil Hogge; 251p; published by SunRise Publishing Ltd, 124 City Rd, London EC1V 2NX; £14.99 □

