Jabberwock

The Magazine of The Society of Friends of the Fleet Air Arm Museum

No. 93
November 2018

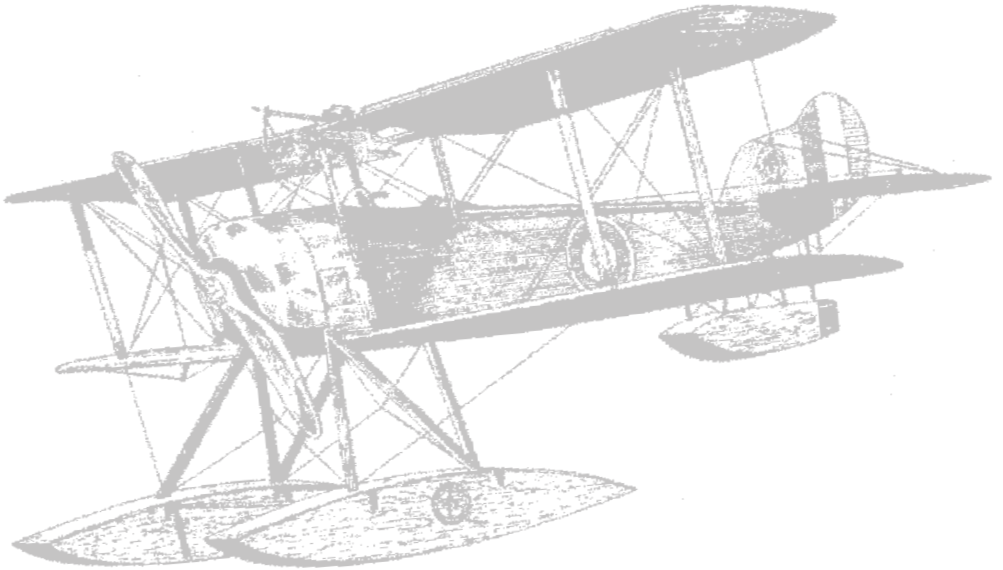
SOCIETY OF FRIENDS
FLEET AIR ARM
MUSEUM

In this issue

Plus all the usual features: Readers' letters, Snippets from Council meetings, monthly talks programme, Talks Reviews, latest membership numbers etc.

THE NATIONAL MUSEUM ROYAL NAVY

SOCIETY OF FRIENDS FLEET AIR ARM MUSEUM



Patron: Rear Admiral A R Rawbone CB, AFC, RN
President: Gordon Johnson
FLEET AIR ARM MUSEUM
RNAS Yeovilton
Somerset BA22 8HT
Telephone: 01935 840565
SOFFAAM email: fleetairarm.sof@nmrn.org.uk
SOFFAAM website: fleetairarmfriends.org.uk

Registered Charity No. 280725

The Society of Friends of the Fleet Air Arm Museum

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Admission
Members are admitted to the Museum free of charge, on production of a valid membership card. Members may be accompanied by up to three guests (one guest only for junior members) on any one visit, each at a reduced entrance fee, currently 50% of the standard price. Members are also allowed a 10% discount on goods purchased from the shop.

Note: *These concessions are provided at the discretion of the General Manager of the Museum and could be removed at any time.*

Contributions
We are extremely grateful to all those who contribute articles and material to the magazine, even though it is not always possible to use every item!

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"Smoke on - Go!"
HC3 Merlin photographed by Chris Penney at RNAS Yeovilton Air Day July 2018

EDITORIAL

In this edition we carry a selection of photographs of the Yeovilton Air Day back in July - a reminder of the long hot summer. We also carry a description of the contribution made by the Royal Naval Air Service to the campaign in Gallipoli in 1915, together with an extract from the diaries of George Bently Dacre, one of the first RNAS pilots to damage a surface ship with an air-launched torpedo, albeit the aircraft was taxying on the surface at the time!

Two Society members volunteered to man the SOFFAAM stand in the FAAM marquee at Air Day and this raised the profile of the Society. This reminds us how much we depend on volunteers to keep all the Society's activities going. You will see from time to time reminders that volunteer posts are falling vacant and we are always on the lookout for enthusiastic help.

At the recent Annual General Meeting of the Society, a member asked: what is the editorial policy of Jabberwock? The Editor replied that about half the content consisted of regular items - readers' letters, snippets from Council meetings, the future talks programme, summaries of talks and so on. For the remainder of each issue he relied on contributions from individuals. These almost always exceeded the available page count, so there had to be a process of selection. His intent was to make the magazine varied and ineresting, while always maintaining its core emphasis on naval aviation.
Our readers' responses seem to support the assumption that we are achieving tis aim. However, if you do not agree, please write or email us to say so!

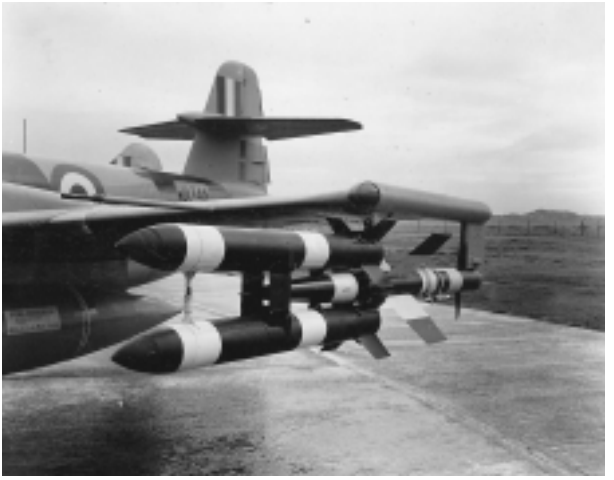
Several other issues were raised at the AGM and these will be covered in the minutes, which will be available on the website in the near future. While on the subject of the website, we have recently added the role descriptions of Council members to the site, to give an overview of what they do on your behalf.

On page 36 you will see the booking form for the Christmas lunch on 15 December. This is always a popular event, so early booking is recommended! Although it is perhaps a little early, the Council wishes all of our members a vey merry Christmas and a happy New Year.

LETTERS TO THE EDITOR

Malcolm

Further to Rod Dean's lecture and the article on the Meteor, a little-known task was carried out to test the Fairey Fireflash, an air to air guided missile in the early 1950s. Fireflash was a radar beam rider and the programme was run in parallel to the de Havilland Firestreak programme, which used infrared heat seeking guidance. You must remember that no one knew how effective guided weapons would be or whether insurmountable problems might arise later in the programme, so the two programmes were run to ensure that a suitable system could be available. It was also part of the plan to use the ranges at Woomera in Australia. Both programmes were large, expensive and complex. Fairey built up a fleet of eight Meteors as follows



Fairey Fireflash beam-riding missile on the port wing of a trials Meteor. The missile itself was unpowered, being boosted to Mach 2 before the rocket boosters were jettisoned. The missile had a radio receiver in the tail to receive guidance signals from the aircraft.

Meteor NF11 Serial Nos WD743, 744 and 745 - fully missile capable, with full radar installation, based in the UK

Meteor NF11 Serial Nos WM372, 373 and 374 fully missile capable, with full radar installation, based in Woomera.

Meteor T Mk7 Serial Nos WA738 and WF781 missile launch capable, but no guidance system.

This was all back in the golden age of the British Aircraft Industry1953-1958.

Dave Gibbings

Dear Malcolm,

After reading Robert Heath's comprehensive review of the Gloster Meteor talk presented by Rod Dean in May (Jabberwock 92), I remembered having seen B&W film of a spectacular solo Meteor display at an early Farnborough air show. Research took me to the summer of 1951 when despite economy worries and the Korean War, Britain entered a period of renewed optimism. The Festival of Britain had opened on London's South Bank and Winston Churchill was back in 10 Downing Street. Our aircraft manufacturing industry was booming with advance orders for V bombers, second generation fighters, Comet airliners and new gas turbine engines, so the stage was set for a record breaking SBAC trade exhibition and public air display.

Zurakowski as a test pilot in Canada in the mid-50s

Test pilot autobiographies of the early 1950s reveal remarkably relaxed rules governing flying displays. Sonic bangs were permitted, much to the disapproval of local residents but delight of spectators. It all added to a carnival atmosphere enhanced by some vivid paint schemes. At the 1951 display Hawker Siddeley flew an eye catching red Avro 707A and blue 707B. Gloster Aircraft provided several Meteors including a highly modified F8 carrying Class B markings (G-7-1) flown by Jan Zurakowski (Zura) 37, a former Polish Air Force fighter pilot. Following the German invasion of Poland Zura had made his way to Britain, arriving in early 1940. Quickly recruited to an RAF Spitfire squadron manned by Polish pilots, he served with distinction for the duration of the war. After completing an ETPS course Sqn Ldr Zurakowski left the RAF and joined Gloster in 1947 as an experimental test pilot under W A (Bill) Waterton. His work involved Meteor development

flying of various marks which led to the securing of valuable contracts abroad.

Spotting a potential export opportunity Gloster decided to fund a private venture Meteor strike version; converting an F8 (G5/1210) equipped with fixed wing-tip fuel tanks and 24 rocket projectiles mounted on under-wing pylons. While test flying the modified F8, Zura perfected a vertical cartwheel descent manoeuvre which he demonstrated to over 100,000 astonished spectators during his 1951 Farnborough display slot. How did he do it ? Popular opinion hinges on throttle control alone, but a few years ago our former Society Chairman Sqn Ldr Maurice Biggs confided that he and a fellow Meteor pilot had both unofficially tried replicating Zura's trick. "It was totally impossible in a T7" he said. Could the answer lie with G-7-1's unique handling characteristics, tip tank fuel, aerodynamic effect from 24 RP's or just incredible piloting skill? In 1952 Zura left Britain to join Avro Canada in Toronto. He continued his career testing the CF100 Canuck and in 1958 flew the first CF105 Arrow Mach 2 interceptor before the project was cancelled in 1959. Swapping flying for farming in 1960 he lived to a ripe old age of 89.

As a postscript, Robert mentioned two civil registered Meteors : F4/G-AIDC and T7/G-AKPK. There were at least two more: F8/G-AMCJ and T7/G-ANSO. Civil identity probably assisted with international clearances and by the time production ended Gloster had sold Meteors in 12 overseas countries – a remarkable success story of the time.

Richard Hufton

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Dear Editor,

Why does the Planes Homeware Range of gift items in the Museum's NMRN-run Shop feature a Seafire wearing French roundels? Does our mutual defence cooperation with France really extend this far?

Yours intrigued,
C Penney.

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SNIPPETS FROM COUNCIL MEETINGS

From the September Meeting:

• *The Chairman opened the meeting and welcomed the attendees.*

He reminded members that Bill Ellison had advised that he would retire from the Council at the AGM. The Chairman asked that his thanks to Bill for his valuable contribution to the Society, in particular in organising the Grand Draw, should be recorded in the minutes.

• *The General Manager gave the following report:*

The Museum has successfully tendered for a contractor to assist with bridge repairs (over Ocean Way) at the Museum. The works will commence in the week commencing 5 November and the Museum bridge will be shut for three weeks during the works. All access and ticketing will therefore be via the ground floor.

We have had a challenging summer, measured in visitor numbers. The industry has experienced a 6% reduction in overall numbers so far this season and FAAM has experienced a similar downturn. The lack of rain has been an issue during the holidays – the Museum has several special offers planned this coming winter. It is expected these promotions will see the Museum remedy some of this reduction during the off-season.

Tours to Cobham Hall continue to be popular and continue to sell well. Tickets are £12 and available now from the Museum website and Ticket Desk. The next confirmed dates are on 25 October at 2pm and 3.30pm. Tickets are already on sale for dates later in 2018 which include 6 December 2018 and also 7 March 2019.

The Museum will host the second annual MotoFest this coming weekend 15/16 Sept outside on the green. The event is run in partnership with South Somerset District Council.

The Museum sees the return of 'Top Gun' and our Cinema Experience to the Flight Deck on the 29th of December. Visit http://www.starlight-cinema.co.uk/ for more information.

Tickets are already on sale now for traditional favourites, such as the Christmas Concerts under Concorde (13/14 Dec) and the next of the bi annual 'open cockpits' (17 Jan 2019). Please visit the Museum website at www.fleetairarm.com for more information.

The Museum is delighted to

announce a small temporary exhibition in Hall One running from 24 October to 30 November 2018 inclusive with the Embroiders Guild, entitled 'War Stories'. The exhibition will be commemorating the 100th anniversary of the end of World War 1 and be installed throughout Hall One, comprising 100 embroidered hearts in association with the Soldiers, Sailors and Air Force Association (SSAFA) (Wilts). The heart displays are FREE to see with a valid Museum ticket.

The Museum will shortly conclude its main summer season and reduce opening hours as standard for the winter.

• *The Chairman gave the following report:*

He asked the Secretary to comment on the various initiatives proposed to increase the use of IT in taking payments from the public. The Secretary replied that the joining form now enabled new joiners to pay the fee by BACS transfer. He had investigated the use of Paypal, but regrettably, he had been unable to complete the Paypal registration process.

There was a need to clarify the roles of Publicity organiser and the role of co-ordinator of all the activities at talks evenings. There was no single individual who attended each talk and ensured that every element of the evening progressed satisfactorily.

• *The Talks and Visits Organiser gave the following report:*

Speakers for early 2019 include Graham Mottram in January. Tony Davies has a new talk. He has agreed to deliver this in March.

The visit to Aerospace Bristol in November is postponed until March or April 2019. Finally I am pleased to say that Mike Strang is recovering well from a heart attack last July.

• *The Membership Secretary gave the following report:*

Membership numbers continue to fall. Since the last meeting we have lost 18 and gained 7. For the record, 7 new applications have been received since the June meeting. Of these, 0 have been downloaded from the website, 7 are from 'Join' leaflets picked up in the FAAM. For comparison, for the three months June, July and August, in 2017 we gained 16 new members, in 2018 just 8 new members.

• *Any other business:*

The Chairman said that we urgently need to recruit members for the roles of Talks and Visits, Grand Draw organiser and Functions Co-ordinator. The President said that he will share his views on the recruitment process.

Chris Penney had provided various useful suggestions on the subject of publicity and this initiated a lengthy discussion on publicity and recruitment.

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MONTHLY TALKS REVIEW

Summarised by Robert Heath

JULY 2018 TALK
"C-7A Caribou Operations - Republic of Vietnam 1968-69" by Jack Froelich

The very mention of the name de Havilland Canada conjures up several really interesting and enduringly successful designs that have each made their mark worldwide: Chipmunk (or Chipfire as some have called it due to its manoeuvrability), Beaver, Otter,

Our speaker, Jack Froelich

Twotter (Twin Otter), DH6, DH7, Buffalo and of course, the subject of tonight's talk the Caribou. It is not a pretty aircraft and I suspect the Caribou is something of a Marmite design - you either love it or you don't. For me, and no doubt the 70+ people that attend these evenings, the talks are always extremely entertaining, but the prospect of hearing about the Caribou was unmissable - yes, I like the Caribou. It is certainly not handsome, but it looks absolutely right for what it did so well.

Our speaker Jack Froelich knew the aircraft first-hand as a pilot in the US Air Force. His job was to support the US Army in North Vietnam. Originally, the Caribou was operated by the US Army, but in 1967, Jack tells us, they were forbidden to fly any aircraft weighing over 12,500lb, so the Caribous and any other large aircraft were transferred to the USAF. The USAF meanwhile had to hand over its helicopters to the US Army in exchange..

What was the Caribou and what made it different? It was designed for Short Take-off and Landing (STOL) operations; it could carry up to 3 tons payload; it weighed 13 tons; in American operations it had a crew of two pilots and one Loadmaster. It was designed to operate from rough landing strips inaccessible to most other aircraft; it had a large ramp at the back to enable rapid loading and unloading of troops and cargo; and it needed around 1,000ft in which to take off. A typical cargo could be 32 Infantrymen, or 14 stretcher litters, plus 10 seats, or as frequently happened, animal transport!

The DHC4, as it was first known,

flew in 1958 and was the third STOL aircraft by DHC, preceded by the Beaver and the Otter. To achieve its very impressive performance, it was powered by two Pratt & Whitney Twin Wasp R-2000 7M2 radial engines producing 1450hp each from the 14 cylinders. The same engine had proven its reliability in the Douglas DC4 and Skymaster. What was different in this instance was that the engine cowlings had no cooling gills and the Hamilton Standard propellers were fully reversible. The engines also had two augmenter tubes extending backwards over the wing, which in theory helped to boost performance. However what did work was the flow of air blown over the flaps. The flaps were full-span, double slot (in effect two flaps - one hinged behind the other) Fowler flaps with an 80 degree droop. In addition, when the flaps were operated, the ailerons also drooped. All this, with the augmented air being blown over the wing meant that very high lift was achieved, enabling a typical approach speed of 60kts and touch down at 35/40kts. That is the equivalent of a typical small, light aircraft, rather than a 13 ton cargo carrier. Not only that, but it was a joy to fly, although it had to be flown 100% of the time - no casual hands-off flying while you fidgeted with the chart. In its original form the DHC4 was designed for single pilot operation, but that was not the American way of doing things, so two pilots it was.

The payload was less than that of a DC3, but the great benefit in many forward bases was its STOL performance. The fin and rudder are absolutely huge and they earned their keep on operations from small dirt airfields requiring a steep climb out. According to the operator's handbook the minimum speed in these circumstances should be 80kts. However, it was soon discovered that on short fields just 75kts was feasible by holding the aircraft straight and steady using the enormous rudder until proper flying speed could be gained. Niceties are set aside when people are firing live bullets at you from just over the hedge. Small arms fire was effective up to about 3,000ft. To minimise the risk of small arms damage, crews either flew high, or as Jack preferred, very low. On these operations it was essential to ensure that at least 1,500lb of fuel was carried in the wing tanks to maintain their stiffness.

Internally, the floor was made of plywood and could carry standard 4ft x 4ft pallets. Seats were built into each side of the aircraft facing each other, or two Jeeps could be carried instead. For comparison, it could carry more than a Chinook helicopter. The pilots' cabin stood 3 to 4ft higher than the cargo deck. The instrument panel was quite basic and was designed for daytime, visual operations, where you check landmarks against a chart. It was not designed for night flying and instrument flying, but simple bush-flying. If you had the misfortune to fly through rain you got wet, because

the Caribou leaked like a sieve. It was also very, very noisy. One luxury that USAF Caribous had that Royal Australian Airforce Caribous did not have, was weather radar. This enabled pilots to take some of the guess-work out of navigating by heading for the coast and following its contours and spotting rivers on the radar as they progressed.

The DHC Caribou in USAAF colours

The aircraft itself was reliable and so were the engines, which was fortunate, because all maintenance was conducted outside in sweltering heat and tropical storms. Engine access was helped greatly by the barn-door type engine cowlings. At the end of the Vietnam War around 50% of the Caribous went back to the USA and were used by the Reserve, while Australia kept theirs in front line service until the 1990s and retired the last one in 2009.

Operations were typically to move both military and civilian passengers (Jack openly acknowledged that they hadn't a clue who most of the civilians were, because their travel passes were printed in Vietnamese and they could easily have been North Vietnamese soldiers going home on leave for all he knew). In addition they moved many cows. Most of these were dropped by keeping the aircraft at a steady 110kts at 300ft and then sliding out the crates containing the cows, to float down on two cargo parachutes to a soft landing. In all the time he was in Vietnam, Jack knew of only one cow to receive any form of injury, and that was a broken leg. As a change from dropping cows, they also dropped chickens in crates. The idea behind all this was keep the mountain tribesmen (Montagnards) on the side of the USA. The tribesmen were nomadic, but the intention was that by dropping cows to them, they would stay in one place to breed them and in due course the tribesmen could be trained as soldiers. That was the theory. The reality was that the cows and the chickens very quickly became the meal for the day. An expert also proposed that it was essential to drop trained German shepherd dogs, which the tribesmen were delighted to receive as a change in diet.

The Caribou often supported Special Forces into and out of forward bases, as well as such mundane, but important tasks as returning for reuse all the Chinook underslung cargo nets and slings deposited in the remote drop-off points.

Finally, Caibous were used to provide occasional support for 'Air America', the quasi civilian airline that conducted covert military operations in areas that the authorities preferred to not talk about.

Home base for Jack Froelich was Cam Ranh Bay. From there they would fly to places such as Dak Pek where special training was required before any pilot was allowed to attempt a landing. It was very tricky and touchdown had to be made in the first 10 ft of the runway to successfully get in. One thing it did demonstrate was the crashworthiness of the Caribou. It was a tough aircraft and of the relatively few that crashed, most occupants survived. Plei Me airfield was a Special Forces base frequently attacked by the North Vietnamese. The runway was only 1,100ft long which made full use of the STOL features and full reverse thrust; Lei Khe airfield near Saigon was surrounded by a Michelin rubber plantation still in full operation. The plant manager operated a Cessna 190 to enable him to do his job properly and to take the family shopping in Saigon. The fact that he was in the middle of a war zone appeared to be no problem to him; Man Buc airfield in the Central Highlands required nerves of steel and determination 'to get it right'. The runway was surrounded by hills and the approach to land required a climb all the way up. At the last minute, at a set point a 90 degree turn was required before you dropped the aircraft onto the runway. By way of compensation, one of the bases had a Michelin Star chef and any run into that base was always welcomed.

Jack made comparisons with other similar aircraft, such as the C123 (Fairchild Provider) and DC3, both of which were much in use. In each case these aircraft could carry more cargo, but required long runways to operate. They could not do what the Caribou did so well on small, inhospitable airfields. I was interested to learn that South Korean troops were also involved in the Vietnam war, primarily to provide base security. From Jack's experience, they were very hard people and genuinely took no prisoners.

This was a very interesting, very lively and different talk about an unusual aircraft. I loved it. Thank you Jack Froelich for a most enjoyable and informative evening - and thank you to the backroom 'boys' of course for freshening us up halfway through.

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JUNE 2018 TALK
"Recent Developments in Martin-Baker Ejection Seats" by Philip Rowles, Vice President Engineering, Martin-Baker Aircraft Co. Ltd.

As we entered the auditorium this evening we were greeted by the sight of a very colourful parachute canopy draped and spread wide from ceiling to floor, plus an ejection seat. If that were not enough, there was a table full of rocket motors and other critical actuators necessary for ejection. No ambiguity about the subject then. Martin-Baker may not be a household name, but there is no doubt that they are well established world-wide in their specialised business of saving lives through their aircraft ejection seats. Martin-Baker is the 96th largest aerospace company in the world. They have supplied 85,000 ejection seats, 16,500 are still in service and 7,569 lives have been saved - including 10 so far this year, and finally they have a 53% share of the supply of ejection seats world-wide. The main factory is at Denham, Bucks and flight tests are made from Chalgrove in Oxfordshire. There are sister factories in the USA and Australia, plus both French and Italian joint venture enterprises. Each contract to supply ejection seats has to be won against stiff competition from international suppliers.

Our speaker, Philip Rowles, grew up alongside a neighbour who, Philip told us, had made the first ejection from a Harrier 'jump-jet'. The Harrier had just completed a practice bombing exercise and was on finals to land, when the engine died at 100 ft altitude. The pilot instantly pulled the eject handle and was shot to safety. Now that is the stuff to fire the imagination and ambition of a young chap and it was not wasted on Philip. He chose engineering as a career and when the opportunity came to join Martin-Baker, his dream was coming true. Philip described the modern equipment as Crew Escape Systems, designed to eject crew members well clear

of the aircraft structure and with inter-seat connections to stop crew members ejecting into each other. The more the talk progressed the more we realised the complexities and variables that have to be taken into account every time. After his own company's seats, Philip opined that Russian-made equipment took second place, ahead the USA and other alternatives.

Martin-Baker is still a family business, whose founder James Martin was born in 1893 to a farming family. Naturally, he was expected to take over the family farm, but James enjoyed working on the farm equipment and soon became a self-taught engineer. In 1934 he joined Captain Valentine Baker to form the Martin Aircraft Works to build the MB1 aircraft, based on Martin's own design patents. Several designs for fighter aircraft followed as private ventures to meet Air Ministry specifications, but none were taken up and converted into contracts. Some of these designs looked very good indeed, for example the MB 5, which was designed to be easy to manufacture and maintain. It also set the benchmark for cockpit layouts and its performance was considered outstanding by test pilots, including Capt Eric 'Winkle' Brown. However, the skills that James Martin developed as an outstanding engineer did not include diplomacy. He had a tendency to upset politicians and that is not a winning way. Sadly, Valentine Baker died in 1942 during a test flight of the MB 3 aircraft.

Nonetheless, the Company won contracts to manufacture aircraft components during WW2 and In 1944 they were approached by the Ministry of Aircraft Production to investigate systems to enable pilots to bail out of high speed aircraft. At this point, Philip showed us a splendid piece of film. It was taken at Farnborough and showed a Spitfire fuselage mounted on the ground in front of which was a huge wind-tunnel type propeller. Behind the Spitfire was a large wide-spread net. A 'pilot' entered the cockpit, the wind generator propeller started and gradually built up speed while the 'pilot' attempted to climb out. It was soon clear that above speeds of 150mph this was more and more difficult. With the dawning of the jet-age the need for a more effective escape system was unavoidable.

Martin-Baker did not invent

ejection seats. Both Germany and Sweden had already fitted aircraft with them during WW2, but in general they used compressed air to launch the seat. Philip then showed us another film sequence from October 1944 in which a modified Boulton Paul Defiant demonstrated a swing-arm catapult ejection system. In these early systems, having ejected from the aircraft, aircrew were required to separate from the seat manually. If you were incapacitated in any way, that was not an easy task and your problems were far from over. The first emergency use of a Martin-Baker ejection seat was on 30 May 1949, when Test Pilot 'Jo' Lancaster encountered severe pitch oscillations at 320mph in the Armstrong Whitworth AW52 (Flying Wing). Everything happened as briefed and 'Jo' was lifted clear of the aircraft to land safely. In those days, it took a good many rather long seconds before you were actually suspended beneath the parachute.

Seat ejection was gun-driven using gas in the early days. By the mid 1960s, the Mk7 seat was introduced and was the first to use an under-seat rocket which extended the lift of the seat and gave a zero/zero performance (zero altitude/zero speed at ground level). To date these seats have saved 2,430 lives and are still in service in Greece, Germany, Egypt, USA, Turkey and Japan. The next significant step was the Mk10 seat, which enabled ejection at 600kt speeds and restrained limbs to stop them flailing around. 860 lives have been saved by this seat, which is in operation with a vast number of countries.

The US Navy has long been a Martin-Baker customer and 1985 it contracted Martin-Baker to develop the Navy Aircrew Common Ejection Seat (NACES) for the F-14, F-18 and the T-45 Goshawk. 2,400 NACES seats have been delivered to date. Also known as the Mk14, it is the first seat to be comprehensively electronically controlled, whereas predecessors were electro-mechanical. It is in use by several countries and has saved 130 lives to date.

The latest and greatest seat is the Mk16, or US16, as fitted to the F-35 Lightning, Typhoon, T-6 Texan and T-38. Clever and capable as the previous seats have been, this seat represents a marked step in technology to meet very high set parameters. It uses a twin ejector gun propulsion system as a part of

Martin-Baker still prefer their 50 year old Meteors for ejection seat testing

the seat structure and is entirely self-contained, requiring no power from the aircraft. It has its own batteries and a large back-up supply of oxygen. It takes less than 20 milliseconds for the computers to fire-up and the seat rockets give 4,000lb of thrust in 3.5 seconds. It has a single parachute harness as a part of the seat and now has only one pull-handle to initiate ejection, whereas previously seats also had an overhead handle. To make it all happen so quickly, a great many pyrotechnics are used and redundancy and duplication abound to make it all as fail-safe as possible. All Martin-Baker seats are capable of operating underwater and carry enough on-board oxygen to keep you breathing while a ship passes overhead. This seat has already saved lives. In one instance a test pilot was carrying out engine re-start tests at 42,000ft, which completely drained the aircraft batteries, leaving the pilot totally 'powerless'. He ejected and then had to wait 2.5 minutes until the descending seat allowed him to separate from it safely at 16,000ft.

The number of parameters to be taken into account during an ejection is almost endless. The obvious ones are speed, altitude, attitude and terrain. However, every seat has to be a standard fit in several, very varied aircraft sizes, shapes and capabilities. Aircrew are dressed in appropriate survival gear and might be as big as hulking great rugby players, or by contrast, very petite females. Helmet Mounted Displays add inertial and aerodynamic loads that could inflict significant neck injuries. There are plenty more parameters, on top of which the crew member might be injured or infirm for other reasons. The seats have to take all of this into account with the objective of keeping the occupant completely unharmed. Progress now has reached the point where the F35B has an auto-eject capability.

Long gone are the days when Bernard Lynch made 40 experimental ejections and 'Doddy' Hay actually volunteered to join the team in the 'hot' seat. Now very advanced instrumented manikin dummies perform the role on very high speed ground sleds and in the air. However, Martin-Baker still prefer their two 50+ year old Meteor aircraft for air testing. Why? Because they are very reliable, stable, less affected by bird strikes and the engines are set well away from the fuselage, so that they are not affected by the ejection blast of the seats - Martin-Baker also has oodles of spares to keep them in the air.

I can understand what drew Philip Rowles to Martin-Baker. It is an endless challenge and successful results are very visible and gratifying. This was an excellent, fast paced evening, thank you.

Illustrations by Martin-Baker

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RNAS YEOVILTON AIR DAY 2018

Reviewed by Chris Penney

HMS Heron's international air day lived up to its name and again drew a large crowd to enjoy a feast of spectacular display flying in glorious sunshine. It was a chance to show the public the many roles performed by Yeovilton's resident units and update them on the various developments currently underway at the Somerset air station. This year's event attracted an impressive 16 air arms and certainly benefited from being the weekend before the RAF 100 celebrations with increased NATO participation as a result. Particularly welcome were the larger types that people could walk through (and use as sun shades) and among a host of air day debutantes were a Lithuanian C-27 Spartan and Qatari Hercules.

With the UK currently setting up a new North Atlantic Area of Operations for the RN and RAF due to the surge in Russian submarine activity it was good to see partner nations exhibiting ASW aircraft again while the RAF still lack their own. The US Navy returned to the show after an absence bringing their new P-8 Poseidon sub hunter. Unlike its predecessor the P-3, a German Navy example of which was also in the static display, the P-8 has no MAD boom - an identifying feature of Cold War anti-submarine aircraft - technology and tactics having moved on. Not to be outdone the French Navy's Cocardes Marine formation made their UK flying display debut. Combining the old with the new it featured two Rafales, a Falcon 50 MPA and historic Fouga Zephyr (the naval Magister trainer) and MS760 Paris communications aircraft. It remains to be seen if the close defence co-operation with France from which Air Day benefits continues in years to come.

A great selection of NATO frontline fast jets were displayed for people to compare. Of particular note were the Royal Canadian Air Force CF-18 Hornet, Hellenic F-16 Block 52M and Czech Saab Gripen. The Danish F-16 gave a particularly dramatic show cascading flares everywhere. Even though four of the UK's new F-35B Lightning IIs had been in the Country for a month the RAF failed to make an example available. Some inter service rivalries die hard it seems and show goers will have to wait another year for a first glimpse of our new carrier stealth aircraft.

Participation by Yeovilton's own helicopter squadrons was down this year for several reasons. Commando Helicopter Force 845 and 846 Squadrons are currently converting to the Merlin HC.4. The former RAF Merlin fleet they operate is being navalised at Yeovil with folding head and tail rotors, new landing gear, HM.2

compatible cockpit avionics and grey camouflage. By the time you read this three of these new HC.4s will be aboard HMS *Queen Elizabeth* which is now in the US to conduct her first flying trials with the new F-35 jet. Following the withdrawal of the Lynx last year the FAA and AAC Wild Cat community continues to work up on the new type. That RN workhorse, the Sea King, in service since 1969, finally bowed out at this year's show. The remaining Culdrose-based ASaC.7 'eye in the sky' AEW variants are to be replaced by similarly equipped Merlin HM.2s. As always numerous helicopters were well to the fore in the static park including the Whirlwind, Mi-8 Hip, Lynx, NH90 and rare naval Alouette III. Also present was civilian operated Sea King XV666 from Portland-based Heli Operations who are training German SAR crew on the type.

The FAA Museum as usual helped swell the static park and their marquee set up outside Hall 4 was surrounded by a Wasp, Sea Hawk, Wessex and Sea King. Inside kids had a chance to build a wooden aircraft and catapult it off a rolling carrier deck and this certainly proved an attraction. SOFFAAM's publicity stand was also present within it selling raffle tickets to support the Museum and this raised over £300.

The undoubted highlight of the flying, which included the Red Arrows - always a crowd pleaser - was the Sea Fury and MiG-15 duo. The pairing marked 65 years since the end of the Korean War as well as the FAA downing of a MiG by the piston-engined type during the conflict. Two jets are always more impressive to show off than one and the RAF should reconsider their solo Typhoon display as it was eclipsed by the roll demo given by the pair of Aeronavale Rafales. The home team's commando assault finale remains a firm air day favourite. As for the show's static display, while the USAF sent a welcome C-17 all the way from the States, their UK-based types were again absent.

Aircrew always bring their own style to such events and this year was no exception. While the Dutch and Belgians were selling badges and posters the French Navy were offering Camembert and red wine for a £1 (if it had been Brie they would have had my custom). Meanwhile an observation made by AAC crew was that Yeovilton is an airfield not a ship! It was certainly a rarity for a P-3 Orion MPA to be opened to the public and the German Navy personnel were very welcoming. A notice beside the aircraft politely asked visitors not to mention the World Cup football competition taking place. Should it though perhaps have said "Don't mention the VAR!"

Congratulations go to everybody involved in putting on an unforgettable show. Yeovilton's restyled Royal Navy International Air Day returns on July 13th, 2019.

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RNAS YEOVILTON

Pictures and caption

USAF C-17 Globemaster was 'flying the flag' for the home team. RCAF CC-130 foreground

Sea King, Wessex and Sea Hawk

Old and New. French Navy's Lynx and NH90 NFH behind

The US Navy P-8 seen from the flight deck of the German Marine P-3

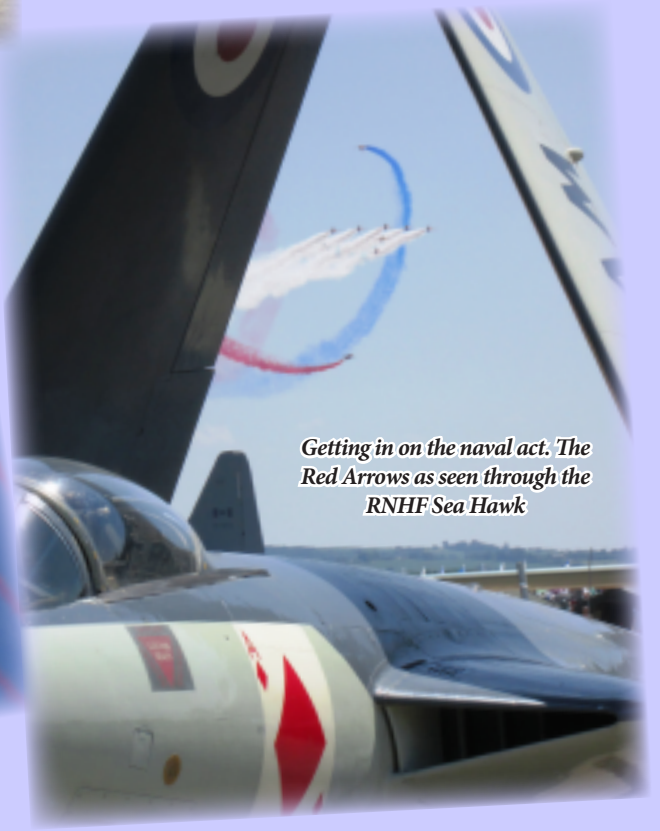
Welco
Red
Yeovilt

ON AIR DAY 2018

ions by Chris Penney

Nice to see you to see you nice. Heli Operations operated Sea King HU5 XV666

Welcome to sunny Somerset. Red Arrows arrive over ovilton under azure blue sky



Getting in on the naval act. The Red Arrows as seen through the RNHF Sea Hawk

MEMBERSHIP

Standing Order Membership cards enclosed for November, December and January.
(Please note that receipt of a card does not confirm receipt of payment.)
Welcome to the new Members who have joined us since the last magazine issue:

3613	Mr D. Faulkner	Somerset
3614	Mr A. Catterson	North Yorkshire
3615	Mr P. Rallings	Somerset
3616	Mr A. Hawes	Somerset
3617	Mr M. Reali	Somerset
3618	Mr J. Shine	Surrey
3619	Mr L. Jamieson	Dorset
3620	Mr A.E. Carter	Wiltshire
3621	Ms S. Melligan	Somerset
3622	Mr T. Mattravers (Family)	Somerset
3623	Mr A. Ashdown	Somerset
3624	Mrs K. Mills	Somerset
3625	Mr A-J Mills	Somerset
3626	Mr B. Gray	Sussex
3627	Cdr R.P. Seymour	Somerset
3628	Mr J. Thompson	Somerset
3629	Mr C. Biddle	Somerset

Total members: 1037. Members who have made a Gift Aid declaration: 725

Annual membership £12
Family membership (Up to two adults and three children) £32
Life membership £180 (£90 for those over 60)

All funds are donated to FAA Museum projects – none is wasted on salaries. Help SOFFAAM to grow by encouraging others to join. It makes an excellent, low cost, but highly appreciated Gift. You will deserve the thanks.

Members who pay by cheque are reminded to post their renewal fee to the Membership Secretary (see page 2 for his contact details) when it is due. To save on postage, we do not routinely send out reminders. To save this annual task, members are encouraged to pay by standing order.

MONTHLY TALKS PROGRAMME

Talks are usually held in the FAAM Auditorium on the last Thursday of each month (except August and December) at 19.30. Entry price is £7. You can pay at the door, but note that these events are well-supported and total numbers are limited. To be sure of a place book your tickets on-line in advance at www.fleetairarmfriends.org.uk/monthlytalks, or buy from the Museum shop. Non members are welcome. The price includes light refreshments, including a glass of wine.

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25 October 2018
Major Simon Pope, 1 Regiment, 1AAC-659-OC
Commander Aviation Reconnaissance Forces RNAS Yeovilton
"An Aviator's Career in Army aviation: from Sand to Sea"

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29 November 2018
Cdre Jock Alexander OBE MA FRAeS
Chief Executive, Fly Navy Heritage Trust
Along with Fly Navy Heritage gifts and Christmas Cards

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Saturday 15th December 2018
SOFFAAM Christmas lunch
See page 28

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25th January 2019
Mr Graham Mottram
"In the slipstream of Daedalus - air power at Gallipoli"

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28th February 2019
Mr Chris Shores
"The Bombing of Sherborne - 30 September 1940"

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28th March 2019
Wg Cdr Rtd Tony Davies
"From Kittyhawk to Cape Canaveral"

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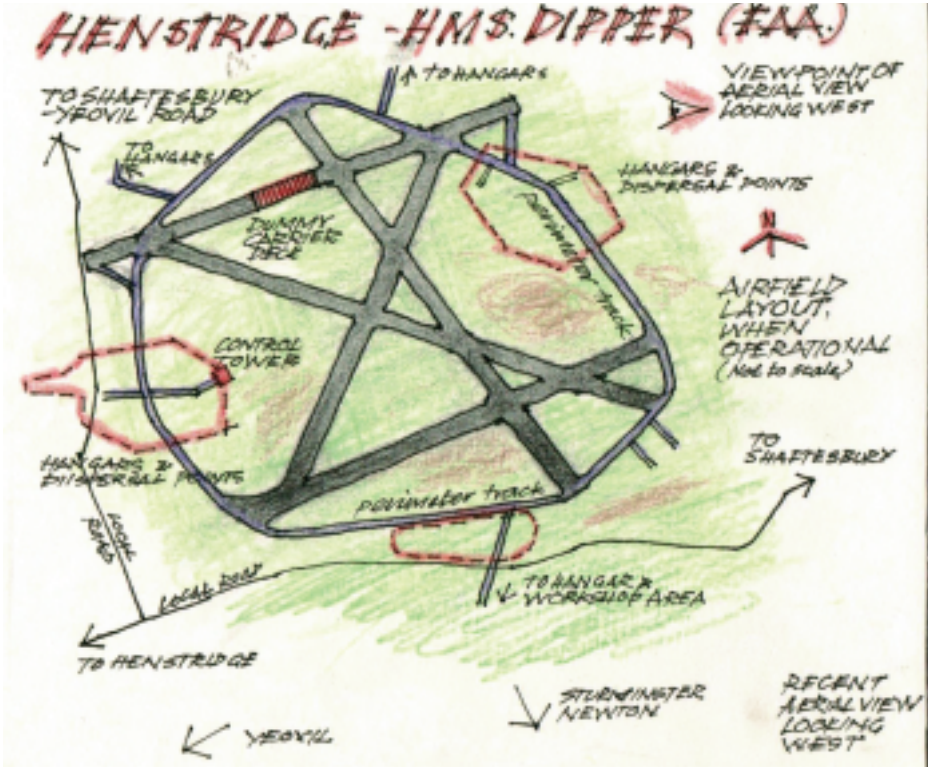
Note that talks start promptly at 19.30. Entry is via the lower (wheelchair) access. Latecomers should ring the bell at the left of the gate to gain admission

ROYAL NAVAL A

An occasional series b



Known to many wartime Fleet Air Arm aircrew as a training airfield, HMS *Dipper* lay along the Somerset county boundary, north of the River Stour approximately 10 miles north east of Yeovil. Initially designated No.2 Naval Air Fighter School, the airfield opened on its 350 acre site on 1 April 1943. It remained a training station until the end of the war. One of its principal tasks was preparing naval pilots to handle what was by naval standards, a high performance carrier fighter, the Supermarine Seafire, known for its difficult landing behaviour. 761 NAS played a key role in this process. Both land and carrier versions of the famous fighter were used together with the Miles Master, a high performance trainer with, on one occasion, the airfield accommodating some 70 aircraft.

Along with at least one other Fleet Air Arm station, HMS *Dipper* possessed five runways. This was

L AIR STATIONS

es by Jim Humberstone

a generous provision by wartime standards, especially when compared with its RAF counterparts. In addition, one of the runways was equipped with dummy deck landing arrangements, complete with arrester wires, aimed at introducing pilots to the short flight decks to be experienced on Escort Carriers and Mac Ships (see adjoining aerial view). Like most other service airfields in the south, Henstridge experienced its busiest time in the period around the D-Day landings.

For these operations, it provided specialised training for Seafire and Spitfire squadrons tasked with artillery spotting and general patrol work along the beaches and inland along the Normandy Coast. This was referred to as Army Co-operation work and included photo reconnaissance functions. The station also acted as a temporary base for squadrons disembarked from their carriers, but while air movements, especially of a training nature, continued well into 1945, by VJ day this had diminished considerably. For a time Henstridge played out its role as a very useful satellite hosting Fireflies and Sea Furies from the much busier HMS *Heron* (RNAS Yeovilton). By the 1950s however, the airfield was surplus to requirements and the station was eventually closed down in June 1957, with a change to private flying use. As part of this change, Henstridge was host to Bristow Helicopters during the mid to late 1950s.

Many distinguished FAA aircrew passed through HMS *Dipper*, during its active years but one stands out in particular, namely Lt Cdr R “Dickie” Cork DSO DFC, who acted as the station’s Chief Flying Instructor (CFI) for a short period. Unfortunately he was later killed in a flying accident, “Dickie” Cork flew with the RAF in the Battle of Britain and was credited with five victories while achieving further fame with a similar score when serving in HMS *Indomitable* during one of the wartime Malta convoys.

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THE RNAS AT GALLIPOLI - 1915

By Chris Howat

(This is an extract from a much longer article by Chris Howat, entitled "The Development of Naval Aviation 1908 to 1918")

Nothing in the history of the Royal Navy prepared the service for the advent of that most deadly weapon, the aeroplane. In 1908, Their Lordships (of the Admiralty) stated: "We are of the opinion that they (aeroplanes) would not be of any practical use to the Naval Service". Despite this, the following year the first airship was built for naval duties and three years later the first four naval pilots were in training at Eastchurch on the Isle of Sheppey. On 1 April 1918, when the Royal Naval Air Service (RNAS) merged with the Royal Flying Corps (RFC), the service had 55,066 officers and men, 2949 aircraft, 103 airships and 126 coastal stations. These were extraordinary developments to take place in just 10 years.

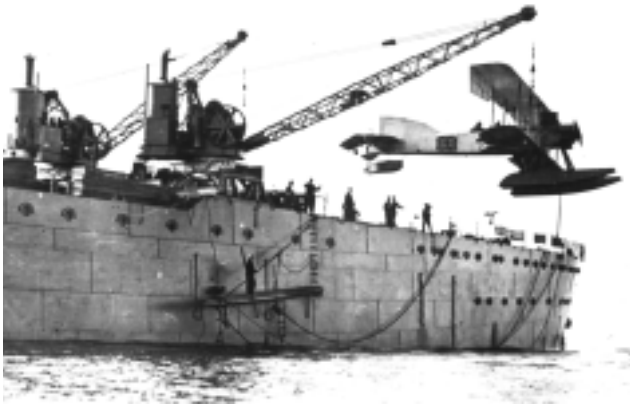
With the experiments of flying aircraft off HMS *Africa* and later HMS *Hibernia* and HMS *London* and the conversion of HMS *Hermes* to carry seaplanes, the enthusiasts at Eastchurch were experimenting with W/T transmitters, ideas on carrying and aiming bombs, carrying torpedoes and aerial defence. The idea of a separate naval air arm became a reality on 1 July 1914 with the formation of the RNAS and on

One of the variety of types operated by the RNAS in the Aegean, this is a Nieuport 12, powered by a 100hp Clerget rotary engine, *Photo F Marlowe*

1 August 1915 the Royal Naval Air Service officially came under the control of the Royal Navy.

When war broke out in August 1914, the RNAS had seaplanes operating from ships, land-based aircraft operating in France and at home and airships patrolling the seas. The offensive value of these aircraft was questionable; the difficulties in operating flimsy and unreliable seaplanes at sea were made worse by weather conditions with wind and sea state either too rough or the sea too smooth. Aircraft-carrying ships had to stop to swing out seaplanes by crane and stationary ships were vulnerable to U boat attack. The first true naval air operation took place on Christmas day 1914 when seaplanes from the converted channel ferries, *Engadine, Riviera* and *Empress* attacked the Zeppelin sheds at Cuxhaven with bombs. Although unsuccessful and with only three aircraft recovered out of nine, the operation demonstrated the potential for a new pattern of naval warfare.

The Gallipoli campaign of 1915 commenced with an unsuccessful attempt by the Royal Navy to force the Dardanelles straits with warships. After this failure, a formidable amphibious operation was improvised and mounted in a frantic haste from England. Lord Kitchener refused to send land-based aircraft and crews of the RFC to support the landings, so the task of aerial support fell to the RNAS. Air Vice Marshal Frederick Sykes, commander of all aircraft at Gallipoli from August 1915 until the withdrawal, wrote later, in 1922: "When in future years the story of Helles, ANZAC and Suvla is weighed, it will, I think, appear that had the necessary air service been built up from the beginning and sustained, the Army and the Navy could have forced the Straits and taken Istanbul." HMS *Ark Royal* with six seaplanes was there in February 1915 at the start of the great bombardment, with the task of providing reconnaissance and spotting for the ships guns. This proved to be a difficult task. She could



HMS* Ark Royal *and Short seaplane in the Aegean

not steam fast enough to launch her aircraft from the deck and often the sea state was too rough or too calm. The aircraft could not climb above 3000 feet and wireless communication unreliable. Nevertheless, some effective reconnaissance was carried out over the Turkish forts at the

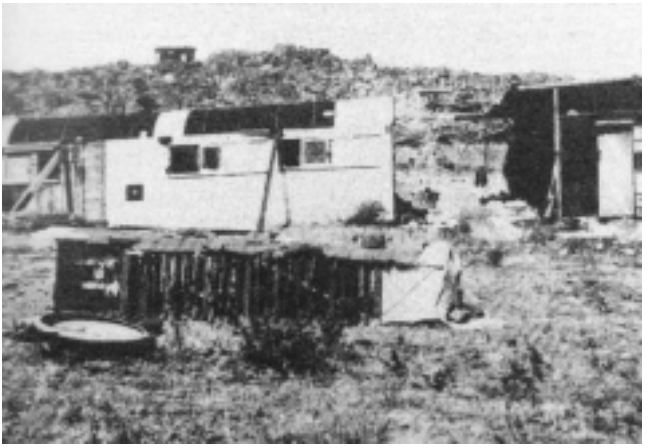
Charles Samson in 1918. Note the RAF wings and (for an RAF officer) the non-regulation beard.

entrance to the Dardanelles and many brave attempts at spotting for the guns. The other most urgent task was searching for mines which, in that clear water, could be seen at depths up to 18 feet.

In preparation for the landings, the Eastchurch Wing, now called No 3 Aeroplane Squadron of the RNAS, was dispatched under the command of Commander Charles Samson to the island of Tenedos in the Aegean, where an aerodrome had been scratched out of a vineyard by men from *Ark Royal* and Greek labourers. Within a week, aircraft were bombing Turkish positions; reconnoitring enemy positions and, for the first time, taking aerial photographs. The usefulness of the air support was clearly recognised, and No 1 wing was despatched from Dunkirk to reinforce the existing air presence. All were then moved to Imbros, five miles closer to the mainland. A French Escadrille took over at Tenedos. The efficiency of the force was hampered by the diversity of the aircraft types, lack of spares and pilots. *Ark Royal* was joined by *Ben My Chree* and her seaplanes. Artillery spotting was improved with the arrival of the balloon ships *Manica,* and later the *Hector* and the more suitable *Canning,* in whose forward hold the balloon, fully inflated, could be housed. More aircraft were sent out and an airship, which was used for U boat patrols. When Bulgaria sided with Germany and the Central Powers, the railway line from Berlin to Constantinople opened for supplies to the Turks. Great efforts were made to bomb the vulnerable bridge over the Maritza River and the railway junction at Ferejik with 112 lb bombs. It was on one of these raids that Lieutenant Richard Bell Davies, later

Vice Admiral, won his Victoria Cross, picking up the pilot of his companion aircraft, which had force landed, whilst under enemy fire and in an aircraft designed for just one occupant.

Other notable achievements included the lifting of a 500 lb bomb in a Maurice Farman plane and dropping it on to a Turkish barracks, the heaviest load launched from an aeroplane so far. In mid-August 1915, in another "first", seaplanes from *Ben My Chree* took off carrying 14-inch torpedoes and succeeded in hitting three enemy ships. German aircraft began making an appearance and aerial activity included the interruption of enemy reconnaissance. This became vital in the days leading up to and including the evacuation of the Gallipoli peninsula.



"Working under hideous conditions..." RNAS officers' ramshackle quarters on the island of Mudros in the Aegean. *Photo F Marlowe*

Aircraft operating from the bases on Imbros and Tenedos and from the *Ark Royal* and *Ben My Chree* gave the RNAS the opportunity to demonstrate a major support role. Short of both aircraft and aircrew, working under hideous conditions with minimum facilities and constant improvisation, the squadrons succeeded in carrying out a huge variety of tasks in support of the Navy and Army. In retrospect, Gallipoli would seem to have provided the RNAS all the justification needed but, as the campaign was deemed a failure, its significance was missed. Incredibly, in all the deliberations of the Dardanelles Commission as it carried out its gigantic post-mortem, there was no mention of the part played by the RNAS, or any suggestion that that part might have been increased. Yet in this campaign, are to be seen, in every detail, the classic tactical uses of naval air power and the pattern for its future use.

I am greatly indebted to the late Hugh Popham and his excellent book "Into Wind. A History of Naval Flying" for much of the material in this article.

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GALLIPOLI DIARY - AUGUST 1915

Flight Lieutenant George Bently Dacre

***The following extract from George Dacre's diary previously appeared in "Voices in Flight - The RNAS during the Great War", by Malcolm Smith, published by Pen and Sword in 2014. Dacre had been serving in HMS* Ben-My-Chree *(which he refers to as BMC throughout) but at the time of writing had been detached to the Monitor HMS* Roberts.**

6th. Tonight 30,000 new troops will land and I expect that Ben My Chree is taking some over from Imbros to W beach.

7th: No straffing by the ship during the night, thank goodness. News says that the Colonials have captured 500 Turks and six machine guns, also the French are doing well. The general infantry advance is timed at 9 am. We hear the landing of 30,000 troops took place just north of the Australians at Gaba Tepe. The Asiatic batteries started to give the Frenchman a hot time, so most of the time we straff them at a range of 12 miles. One shell is observed to knock out one of the Asiatic guns, and the Frenchman cheer us from the trenches. No news has come through regarding the operations, but heavy firing goes on or around Achi Baba incessantly.

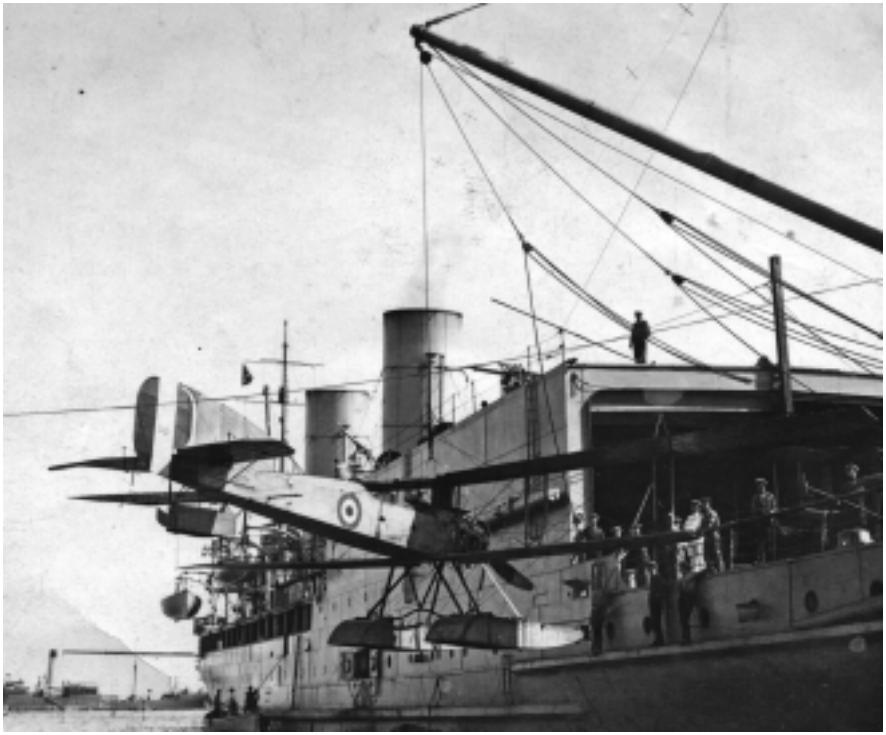
8th. News comes through that the E 11 has sunk the Turkish battleship Barbarousse Hairedane 6 miles east of Gallipoli. The ship with its 11 inch guns has been worrying our men considerably. Also the E 11 has sunk a gunboat transport, while the E 14 on the surface bombarded Gallipoli town. Cheerio for them.

11th: Left Roberts in the forenoon with my machine. Wright takes my place with number 841 as I'm wanted for a torpedo stunt. Left the Rabbit Island at 12 noon and after passing near Cape Helles, put in to anchor off the bay where the Northern Landing took place. The whole place is stiff with transport and battleships mostly of the antique type. A large net surrounds all of us. We are only 300 yards from the shore, which is thick with our troops. Shelling is very near and the rifle firing upon the near hill is very plain. A Monitor nearby is being shelled and clears out. With my glasses I can see everything that is going on ashore and our fellows advancing in the distance, while near ashore they are digging trenches hastily in the heat. Several Red Cross bases with their flags dotted about and boats come off with wounded to the three hospital ships. Our ships give the enemy an occasional shelling and trench mortars can be easily distinguished from guns. Stores and food supplies constantly keep going ashore in cutters and special low barges. Quite a lot of horses are

galloping about.

We stay there about two hours and then push off to the Gulf of Saros where Banks Price is sent off in a Schneider across the lines to see what ships there are in the Sea of Marmara off Gallipoli town for us to torpedo tomorrow. He returns with a favourable account of a large ship off the coast north of Gallipoli at anchor. This we shall attempt to torpedo tomorrow if weather is all right etc.

12th: Got up at 2. 45 am. Edmonds on a new Sunbeam Short and myself on my old machine were hoisted out at 4. 30. Edmonds rose well with this torpedo, but I took 20 minutes trying to persuade my old bus to lift. After 20 minutes, by violent piloting and determination I got off, which gave me much delight. However, my delight was short lived for after 10 minutes the engine spluttered out and I had to land. After a quick look around



HMS* Ben-My-Chree *hoists a Short 184 out of the water off the Dardanelles in November 1915. The vessel was a converted Isle of Man packet steamer. An important aircraft support vessel in the Gallipoli campaign, she had a short but eventful life, being sunk by Turkish gunfire in early 1917.

nothing seemed wrong, so I made another attempt and after 12 minutes the same happened, so just as Edmonds was returning I was obliged to give it up. I was bitterly disappointed not to have been able to be the first to actually torpedo an enemy ship.

Edmonds returned and reported that he had hit the ship with his torpedo and returned unmolested across the Sea of Marmara, over the narrow neck of the peninsula to the Gulf of Saros where the B-M-C was resting. During the flight the B-M-C bombarded a Turkish village with its 3 pounders, and a destroyer was bombarding some Turkish positions which were replying to the destroyer. I could see while I was up, shells falling short of the destroyer. In order to get height enough to turn while getting off with a torpedo I was obliged to go at 200 feet or so over hostile country where they fired at me but with no result.

Bank Price came back to say he could not tell whether the torpedoed ship was sinking or not. The E 11 and the E 15 were told to keep a lookout for us in the Sea of Marmara. In the forenoon we returned to Imbros to coal, passing the northern landing on our way where heavy shelling was going on.

HMS* Roberts*, a monitor with a twin 14 inch turret, deployed to the Dardanelles in 1915 for shore bombardment of Turkish positions. Dacre spent some time "spotting" for the Roberts' guns and was subsequently detached to the vessel with his aircaft to mount the torpedo attack narrated in this article.

13th: Coaling all day. Bank Price tested a new machine, a Schneider, and went over to the land squadron to show them how we could fly seaplanes. The translated Turkish Wireless says: "A hostile water aeroplane coming across the peninsula attacked an abandoned ship with bombs. The machine, which was under heavy musketry fire, was brought down and disappeared rapidly in the sea." Hurray!

14th: Went ashore in afternoon to see No 3 Squadron RNAS (Samson's crowd). They were

encamped on the hill with about three land machines pegged down and out in the open. Everybody there was very gallant in spite of the swarms of flies, heat and sand dust. Two more RNAS Squadrons are arriving. The ground is small and bumpy. An airship shed is in course of erection, the work being performed by Greeks. A band of Turkish prisoners do quite a lot of useful work. They seem very happy and are very, very civil. We have tea in a tent with tin mugs and tin plates. Bread and jam, tea and tinned milk. Met Collett, Newton Close and Bromet from the *Ark Royal* which is just alongside us now. The headquarters staff are just adjacent with No 3 Squadron. The submarines again appear on the scene after a long absence and ease off a torpedo at a transport without effect. A new Sunbeam Short is taken aboard from a collier.

15th: Sunday. Busy in the morning getting a new Short erected. Heavy swell running. Col Sykes of the R.F.C. came aboard to inspect machines and equipment.

16th: Busy all day getting machines ready for torpedo run tomorrow.

17th: Got up at 2.30 feeling very sleepy. Hands fell in at 2.45. Tried our engines and looked around to see everything was correct. I was hoisted out at 4 am in the Gulf of Saros and Edmonds just after me on a new machine, mine being the original No 184. Edmonds got up quickly, but I took a quarter of an hour struggling to get off with my torpedo, the safety pin of which was now out. After 20 min I struggled the machine up to 1,200 feet around the Gulf, thence passing over the narrow neck of the peninsula. It is only 3 miles across here and about 200 to 300 feet high. It however looks mighty wide when you're lowdown over it and have your life hanging on your engine. In the semi-dark several flashes from individual rifles were firing at me, but no goals were scored. Having got across into the sea of Marmara, I glided down to 300 feet and eased my engine a little. At this height it is very hard to be seen with the mountains as a background in this in the semi light. I passed down the centre of the Straits, past Gallipoli town, several small vessels and a lot of sailing ships. Six or seven miles further down I could see a Hospital ship coming up and in the distance Edmonds alone, returning from his objective, which were several large ships in the Bay about three miles north of the narrows. Just then my engine started to make terrible noises and die out so I was obliged to land. This I had to do across the wind as my height was not sufficient to turn into the wind. A heavy landing resulted but no damage. The hospital ship was quite near and altered course towards me. I thought this must be the finish, either the numerous batteries would sink me or I should be captured and

made a prisoner. I thought this was a proper fix to be in, taxiing slowly in the middle of the Straits and absolutely fed up with the engine failing me the second time. I was determined to make the best of it in consequence.

Now, if I dropped my torpedo it would hit the bank and wake up everything, so I thought a ruse might work. The Hospital ship was only 300 yards off now, so I came close up to it and waved my hand; all the wounded on-board waved back at me and the ship passed on up the Straits. Everyone must have taken me for a friendly craft as boats were dodging around taking very little notice. I let the Hospital ship pass up and half a mile up I can see two ships in a little bay. One a large old wooden sailing ship which hardly looked sinkable, and a large tug alongside a new wooden pier. I taxied up to within 500 yards of it and let go my torpedo, turning round directly after up the Straits. A terrific explosion followed and as I looked over my shoulder I could see spray descending and the target giving a huge lurch. Then all of a sudden rifle shots pattered in the water beside me, and my first idea was to get out of it, being in a desperate funk. By a miracle nothing hit me and inspired by the thought of a bullet in my back, I coaxed the engine up slightly and after taxiing two or three miles got off again to my great joy. Just after getting off I noticed some way back an Aerodrome right opposite the scene of action. All five sheds were closed. I pushed the machine up to 1,800 feet, the engine making a fearful row. Passing Gallipoli town and made for the narrowest part of the peninsula, and when halfway over worse noises occurred and a compression tap came open. I was then only able to make a long glide, passing very low over the last part of land and finally with great relief reached the ship. Here I hoisted my little skull and crossbones flag which I kept on the machine, but it unfortunately blew off with a propeller draught.

I learned that Edmonds had hit a large transport with his torpedo. Col Sykes, Aeronautical Commander at the Dardanelles, together with a reporter to the Admiralty, were aboard B. M. C. at the time and were fearfully pleased with the effort. Banks Price went up immediately afterwards and successfully set two large ships on fire with bombs on the narrow peninsula. So altogether we've won the war today all right. Vice Admiral de Robeck sent a signal congratulating us.

We returned to Imbros and in the evening the Vice Admiral sent for the skipper, Edmonds and myself. He congratulated us and said "A very fine piece of work". We related our stories to him and he was altogether very pleased indeed and said we now have a new weapon which must be seriously reckoned with. Everybody aboard was also pleased, and the ship's company of B. M. C. showed they were pleased by holding a noisy concert in the evening.

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A FOR 'ORSES

Contributed by John Pennington

A *for 'Orses*
B *for Mutton (or Lamb)*
C *for Yourself*
D *for Ential*
E *for Brick*
F *for Vescence*
G *for Police*
H *for Retirement*
I *for Novello*
J *for Orange*
K *for Teria*
L *for Leather*
M *for Sise*
N *for Lope*
O *for Rainbow*
P *for Relief*
Q *for Bus (or Tot!)*
R *for Mo*
S *for Williams (or for the younger generation- Rantzen)*
T *for Two*
U *for Me (or Mism)*
V *for La France*
W *for Quits (or Nothing)*
X *for Breakfast*
Y *for Husband*
Z *for Breezes*

Retired Warrant Officer John Pennington was reminded of this Cockney Rhyming Dictionary by the article "Alpha to Zebra - no Omega" in Jabberwock 92

SOFFAAM CHRISTMAS LUNCH

Saturday 15 December 2018

The Christmas lunch will be held on Saturday 15 December 2018 for SOFFAAM Members and guests. The menu is opposite. Kindly complete the application form below and send your cheque for £22.50 per person made payable to SOFFAAM to me by Saturday 24 November 2018.

Please arrive at the Warneford Restaurant by 12.00; lunch will be served at 12.30. Wine or fruit juice will be served with the meal and is included in the price. I will not be sending acknowledgements. However, should the demand exceed the maximum seating in the Warneford Restaurant you will be advised accordingly.

There will be a talk after lunch, given by Mr Peter Jinks on "Escort Carriers of WW2 – A view from the back seat". The talk will be in the Westland Auditorium. Members and guests are very welcome to remain to listen to this talk.

To: Mrs Rosanne Crowther

St David's, 5, Church Close, Martock, Somerset, TA12 6DS

Name .....

Name of Guest(s) .....

Address .....

.....Post Code.....

Tel Number .....

Please indicate your choice of menu by ticking the appropriate items:

Traditional Roast Turkey ☐ **Grilled fillet of Salmon** ☐

Spinach pie ☐

Christmas Pudding and Brandy Sauce ☐

Baked cheesecake and fruit compôte ☐

CHRISTMAS LUNCH MENU

Complimentary glass of Mulled Wine or Orange Juice on arrival

Roast turkey and all the trimmings

OR

Grilled fillet of Scottish salmon with hollandaise sauce and grilled asparagus

OR

Spinach Pie (V)

******

Traditional Christmas pudding, with Brandy Sauce

OR

Baked cheesecake and fruit compôte

******

Mince Pies (v)

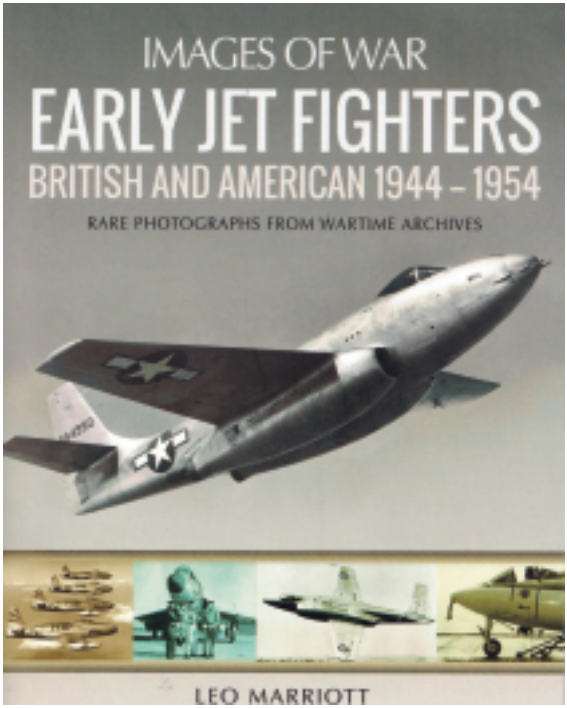
******

Coffee or tea and mints £22.50

Kindly note no refunds will be offered unless agreed by the Chairman.

BOOK REVIEW

By Malcolm Smith



The title is accurate – this book is crammed with around 200 images of early jet fighters, some of them from wartime archives. However, it is far more than just a photograph album; the pictures are accompanied by well-researched text, opening with a potted history of jet engine development. This gives full credit to the genius of Air Commodore Sir Frank Whittle, describing how he had to turn to private investors to fund his early work on jet propulsion because of the complete indifference of the Air Ministry. Perhaps not so well known is the interest shown in 1941 by General "Hap" Arnold, Chief of the US Army Air Corps, in the Gloster prototype E28/39 aircraft and its Whittle W1.X engine. Arnold was instrumental in sending the W1.X engine and drawings of a more advanced successor, the W2.B, to the USA to be given to the General Electric Company. The American company was not slow in developing its own designs, culminating in the highly successful J47, which powered the F86 Sabre and the B47 bomber. Other US companies used British designs to develop their own variants, with Pratt and Whitney producing its J42, based on the Rolls Royce Nene; while Curtiss Wright produced the Wright J65, a variant of the Armstrong Siddeley Sapphire. The author comments that, by the mid 1950s, Britain was still a world leader in jet engine development, with the Nene and its smaller stable mate, the Welland, in full production, while de Havilland was producing its own Goblin and Ghost engines. However, American companies were "flexing their muscles" and were soon

to pull ahead.

British jet fighters receive comprehensive coverage, with the author describing the extraordinarily rapid developments in the decade from 1944. Early marks of Meteor, equipped with engines from Whittle, Rolls Royce and de Havilland are illustrated, while the de Havilland Vampire and Venom soon make their appearance. Eric "Winkle" Brown's exploit in landing the first jet (the second prototype Vampire in October 1945) on the aircraft carrier HMS *Ocean* is illustrated; there is also a rare picture of a single-engined Gloster prototype, to meet specification E1/44. The Supermarine Attacker, with its antecedents in the piston-engined Spiteful, formed the first operational naval jet squadron in August 1951, although it is described as an interim type that only saw a brief period in front line service. A more successful aircraft was its Hawker contemporary – the Nene-powered Sea Hawk. This graceful little aircraft served in 13 front line squadrons and also proved to be a significant export success.

Even before the Seahawk entered service, the Royal Air Force and the Royal Navy were both considering faster and heavier twin-engined fighters. For the RN, the culmination of this procurement activity resulted in the Supermarine Scimitar. This aircraft entered service in 1958 - outside the timescale of this book, but the author describes and illustrates the various prototypes that took part in its lengthy development. Early precursors included the Vee-tailed Type 508 (seen later by this writer in sad condition at the School of Aircraft Handling at RNAS Culdrose) and the Type 525. For the RAF, Gloster's submission for the twin-engined day and night fighter was the Javelin, the first delta-winged aircraft to enter service in the UK.

The author describes how, in the same timescale, Supermarine developed the Attacker into the swept-wing 510 and then into the 535, which became the Swift in RAF service. The Swift was fated to enjoy only limited front-line service, but Hawker had more success with its development of the Seahawk via the 1052 and 1081 into the legendary Hunter. "The Hunter was enormously successful and much loved by its pilots", comments the author.

The chapter on British fighters concludes with a succinct description of the development of de Havilland's twin-boom Vampires and Venoms into successful day and night fighters, followed by the mighty DH110, which after many tribulations later became the naval Sea Vixen. In a tailpiece to this chapter, the author reminds us that the English Electric P1A, the precursor to the Lightning, made its first flight in August 1954.

Moving on to United States Air Force jets, we meet the first example - the Bell XP-59 Airacomet, Powered by two modified Whittle engines, this made its first flight in October 1942, several months before the prototype

Meteor. It never entered operational service and the first really practical jet fighter was the Lockheed P-80 Shooting Star. This was developed into a truly successful fighter, of which 1,731 were produced. It was used in the ground attack role in the Korean War, and the trainer version, the T33, served in huge numbers in the US and many other air forces.

Jets produced by Republic are described, starting with the P-84 Thunderjet. This successful design was developed through several variants, culminating in the F-84G, which was equipped to carry nuclear weapons (the first single-seat fighter-bomber to have this capacity). Using the results of German research into swept wings, Republic developed the F-84 into the F-84F Thunderstreak, powered by a licence-built version of the Armstrong-Siddeley Sapphire.

Designers at North American Aviation were also interested in the potential of swept wings and developed the world's first swept wing single-engined fighter jet. This was the F-86, soon to be named Sabre, of which the prototype made its first flight on 1 October 1947, only two months ahead of what was to be its great rival - the Russian MiG-15. The author describes the many developments of this superb fighter, culminating in the radar-equipped F-86D.

The worsening Cold War in the late 50s and the increasing threat to US and NATO forces in Europe, led the US to realise the need for radar-equipped all-weather fighters. Several are described, including the Northrop F-89 Scorpion and a much-modified T-33 - the F-94 Starfire.

Several naval aircraft are described, including the troubled F3H Demon, whose engine problems almost led to its cancellation; also the fast-climbing Douglas Skyray. The accident-prone Vought F7U Cutlass makes a brief appearance and the final navy fighter of the era, the F11F-1 Tiger, is describd. Although an advanced design, with a slim area-ruled fuselage, the Tiger had only a limited service career, although it equipped the US Navy's Blue Angels aerobatic team from 1957 to 1968.

A final chapter- entitled "A Good Idea at the Time" describes some excursions into novel design concepts, such as mixed jet and propeller powered aircraft and the XP-85 "parasite fighter" designed to be carried beneath a modified B-29. The Saunders-Roe SRA1 flying boat fighter is illustrated, as is the waterborne Convair delta-winged XF2Y Seadart.

In softback format and reasonably priced, this book provides a fascinating insight into a period of unparalleled aircraft development.The author provides a fulsome tribute ro British ingenuity and the debt owed by the USA to early UK designs. It would have benefited from the inclusion of an index, but this is a minor criticism of an excellent volume, which would make a most acceptable Christmas present!

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