



Jabberwock

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

No. 92
August 2018



SOCIETY OF FRIENDS
FLEET AIR ARM
MUSEUM

In this issue

- The Tondern Raid
- News from the Historic Flight
- Visit to SS Great Britain
- AGM Notice
- Flying in the 1950s
- Alpa to Zebra (no Omega)

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



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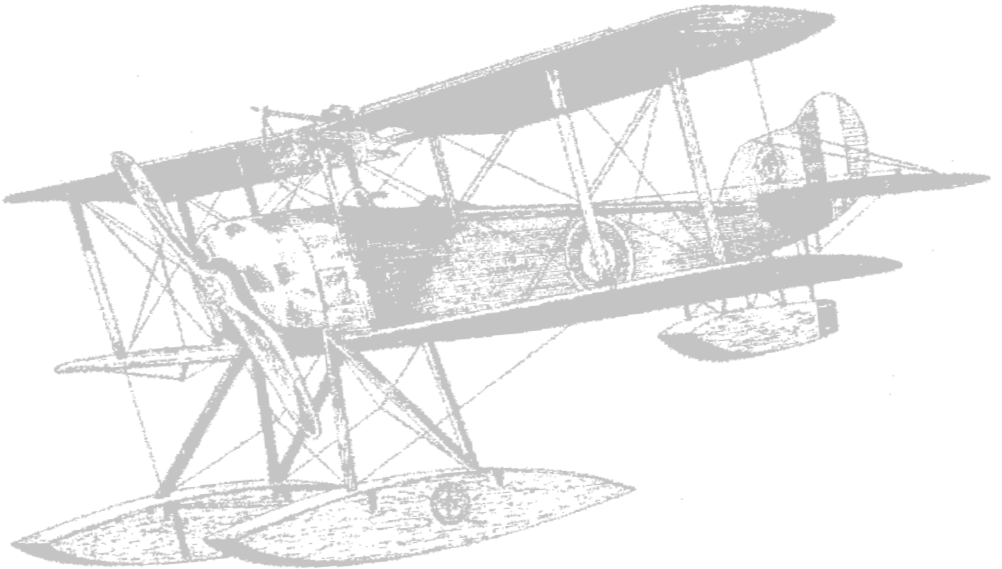
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SOCIETY OF FRIENDS
FLEET AIR ARM
MUSEUM



Sunset - HMS Illustrious
copyright Derek Hyamson

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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.

Copyright

Jabberwock is a privately-circulated publication and, in general, we retain copyright in any material that we publish, whilst always acknowledging the original author. From time to time, the Editor may contribute extracts from Jabberwock articles to other commercial publications. If you or your estate wish to retain copyright, kindly make this plain at the time of submission.

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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Society members start their visit to SS Great Britain



Mk 1 Swordfish W5856 firing up

COVER PICTURE
Gloster Meteor T7, pictured at Duxford in 2011

Note the heavy, sideways-tilting canopy enclosing the two-man crew and the belly tank for additional fuel

Photo: Peter

EDITORIAL

We open with an apology for possibly misleading our readers. As Tony Jupp points out in his letter on page 6, the photograph in Jabberwock 91 supposedly showing a Valiant making an approach to HMS *Ocean* was a composite and the ship pictured not even British! We were misled by the editors of "Aeroplane", who printed the picture in December 1955. It was obviously a delayed-action Christmas spoof!

The Society's Annual General Meeting will be held on 27 September. As required by our Constitution, all Council members stand for re-election at the AGM. Please see the notice on page 9. All members are welcome to attend.

In this issue, we are privileged to carry a summary of a much longer article on the 1918 raid by RNAS aircraft on the Zeppelin base at Tondern (now in Denmark) by the historian Ian Burns. This was an early example of the effectiveness of naval aviation, inflicting losses on the enemy's assets at limited costs to our own forces.

Elsewhere in this issue, you will see that we are looking for a

replacement for Rosanne Crowther in the role of Talks and Visits Organiser. For the many members who attend these talks and the visits, also those many more who read the summaries in Jabberwock, the importance of this voluntary role can hardly be too strongly emphasised.

The panel below provides details from our Membership Secretary on the numbers of new joiners and the current size of membership. This may look a healthy position, but the rate of new joiners has fallen off markedly in the past two quarters. Elsewhere in the magazine we remind you that annual membership would be a most acceptable gift to a friend or relative. It is up to all of us to keep our membership increasing!

Welcome to the new members who have joined us since the last magazine issue:

***Mr D. Faulkner, Somerset
Mr A Catterson, North Yorks
Mr P. Rallings, Somerset
Mr A. Hawes, Somerset
Mr M. Reali, Somerset***

***Membership total: 1034
Gift Aid members total: 726***

LETTERS TO THE EDITOR

Hello Malcolm,

The latest Jabberwock popped through my letterbox this morning, looks like another very good read. The article which caught my eye was by my dear old friend Den Wood who I worked with for many years. Your editorial mentions that Den hoped to take a flight in a Spitfire to celebrate his 94th - well he did manage that!



I've attached a couple of pictures of the flight from Biggin Hill and a short article which his son Alex wrote about his Dad - thought you might like to include them in the next Jabberwock. Den got a whole page in the Western Gazette a couple of weeks ago and quite rightly too, he's an inspiration. He insisted on doing a victory roll in the Spitfire. All that on top of doing a tethered parachute drop from 6000 feet over Dunkeswell to celebrate his 90th. Amazing man and one I'm very pleased to call my friend.

Peter Hoskin



A note from Den's son, Alex:

Den Wood, of Wyndham Court, Yeovil and a resident of the town for over seventy years, celebrated his 94th Birthday last weekend with a special dream flight. In his teens and living in Southampton, he witnessed the maiden flights of the early Spitfire aircraft and dreamt of flying them. As soon as he was old enough, he joined the RAF and trained to be a pilot – but by the time he qualified, the war was ending and his chance to fly Spitfires was gone. He went on to serve on bombers in Africa and the Middle East before returning to civilian life in Yeovil as a Local Government Officer.

Having maintained his interest in aircraft, he has been instrumental in organising and managing an air display, flown many times as a passenger and has in retirement helped the Friends of the Fleet Air Arm Museum at Yeovilton. On his 90th birthday, Den undertook a parachute drop for charity but this year, despite now being registered blind, he has finally managed to fulfil his teenage dream of flying in a Spitfire – just seventy years after he watched the first flights. On Saturday 7 April 2018, he took to the air from the Heritage Hangar at Biggin Hill in a T9 Spitfire – which



T9 Spitfire takes off with Den Wood in the rear seat

rather than Avons and had a multi-wheel bogie main undercarriage retracting into bullet fairings that projected aft of the wings. The structure was also strengthened; It was flown until 1958 and ended

has a second cockpit for training – and in his case, a pleasure flight. After a detailed briefing he climbed in and was strapped to a parachute before taking to the air for a twenty-minute flight. Unknown to Den, a longstanding pilot friend – who has flown him to several RAF Veterans’ reunions, has arranged a mid-air meet up with the Spitfire to fly in formation and record the event on video. It was a day to cherish and one that brought a real sparkle to Den’s birthday.

•••••

Dear Editor,

The Valiant in the composite photo on page 40 [of *Jabberwock 91*] is the only B2 variant produced. WJ954 first flew on 4 September 1953 and was designed for high speed at low level in the pathfinder role. To do this it had RR Conway engines

up at Foulness. I say the photo is composite as the contrast and quality between the upper and lower halves of the photo is different and I believe the lower half shows a US Navy WW2 era carrier with a wooden deck. Also the wing span of the Valiant would have seen it slicing through the island!

Tony Jupp

•••••

Hi Malcolm

The latest edition of *Jabberwock* arrived in the email the other day and once again it is a great read. Many thanks for all you do to produce such a journal - it is always interesting and a great reminder of the way the FAA used to be before the politicians started dwarfing it.

I notice in the journal that an outing to look over the ‘Great Britain’

is planned. Those attending might be interested in the attached photos taken during a visit to the ship in her previous location in Sparrow Cove in the Falklands in 1963-65. A party of us from HMS *Protector*



SS Great Britain in Sparrow Cove, Falkland Islands, in the 1960s

took a boat across from Port Stanley where we were anchored to explore the ship. This was a somewhat hazardous undertaking because the deck was so rotten (as you can see in some of the shots) that you could only walk where the original iron frames could be followed. Otherwise your foot went right through! I recall the large hole in the stern that let water in - you can see the green of the water in some of the internal shots.

Time as an Observer in *Protector* Ship's Flight in that period was one of the highlights of my naval life. It was always interesting, sometimes challenging and often very cold but we enjoyed every moment. Our pilots (John Leeson [63-64], Tony Matthias [63-65], Roy Edwards [64-



Between decks in the hull of SS Great Britain

66] and 'Baron' Crosse who was the First Lieutenant the first year) were extremely skilled and those of us in the back frequently owed our lives to their efforts and to the reliability of Messrs Pratt and



HMS Protector, Ice Patrol Ship, in the South Atlantic in the 1960s

Whitney who built the engines of the old Mark 1 Whirlwind.

Thanks again for your hard work

Best wishes

Joe Barr

(...in Australia so I won't be joining the trip to Bristol!)

●●●●●●●●●●●●●●●●

Dear Editor,

Jim Humberstone's insightful article in the February issue on the Zeppelin terror raids during



A colourful rendition of the Avro 504 (later used to train a generation of pilots) courtesy of Brooke Bond tea

the First World War reminds us that they really constituted the first Battle of Britain. Interestingly the FAA Museum holds a comprehensive archive of the Home Defence reports covering these first air raids on the UK. I found this illustration of the 1914 attack on the Friedrichshafen Zeppelin works by RNAS Avro 504s. It is an educational picture card from a set of 50 depicting the greatest aircraft in history produced by Brooke Bond tea that I collected in the 1970s. Given aerial bombing was in its infancy this long range raid by the RNAS must rate on a par with the

Dam Busters and the Black Buck Falklands mission.

The other tea card in the set that showed a RNAS type was this one of the Handley Page O biplane bomber. The type O/100 was introduced into service in April 1917 but because it was found to have directional stability issues caused by the counter-rotating propellers from the separate left-handed and right-handed engines it was superseded by the

O/400 with only one engine type. The resultant increased torque was overcome by offsetting the fin



Britain's first strategic bomber, the Handley Page O/100

slightly. Wouldn't it be something if a replica of this large Great War bomber was built for the Museum!

**Chris Penney
Taunton**



*Notice of the Annual General Meeting to
be held at the
Fleet Air Arm Museum on*

Thursday 27 September 2018

***The AGM will commence at 18.00 to be followed by the Grand Draw.
The September monthly talk will follow the AGM***

The agenda will comprise reports from Council officers. As stated in our Constitution, all positions fall vacant at the AGM. These are: President, Chairman, Vice-Chairman, Secretary, Treasurer, Membership Secretary and nine ordinary Council members. If you would like to apply for one of these positions, please notify the Secretary in writing or by e-mail by 7 September 2018

GRAND DRAW

Cash Prizes of £500, £150, £75

As well as the usual donated books and DVDs, we are indebted to individuals and local businesses who have sponsored and given prizes for the Draw.

These include

Navy Wings – Capt Eric ‘Winkle’ Brown’s Book ‘Too Close for Comfort’

Hunts Food Service Ltd – round of golf for four

Red Lion Inn Babcary - Dinner or lunch for two

Yapp Brothers Ltd - Wine

Haynes International Motor Museum – Family Ticket

The Aviation Book Shop

Bay Tree Food Co - Hamper

Britvic Soft Drinks Ltd

Frobishers Juices - Hamper

Wessex Animal Trust

Books include:

Fighters over the Fleet

Strike Aces

Fleet Air Arm Helicopters

RAF Little Rissington

NEWS FROM THE MUSEUM

100-year-old veteran makes flying visit to FAAM

One hundred-year-old Mr Douglas Rolton visited Yeovilton's Fleet Air Arm Museum this week for a special visit to see the Fairey Barracuda aircraft project. Mr Rolton, who was 100 last month, flew as an observer/navigator in Royal Navy Barracuda aircraft on the bombing mission against the German Battle ship Tirpitz in 1944. He also survived two crash landings at sea during his career as a Navy pilot, making him a double member of the 'Goldfish Club', the name given to aircrew members who have had to make forced landings over water. William Gibbs, museum restoration engineer, who is



heading the Barracuda rebuild, was able to show Mr Rolton many familiar parts of the aircraft that are being worked on to recreate the last surviving example of a Barracuda dive bomber, using components from Barracuda crash sites, recovered to aid the project. Of particular interest was the window section from the Observer's position in a Barracuda, a view Mr Rolton would have been very familiar with during his flying career.



SNIPPETS FROM COUNCIL MEETINGS

From the June Meeting:

- *The Chairman opened the meeting and welcomed the attendees:*

- *The General Manager gave the following report:*

Visitor Numbers: The Museum has had an indifferent start to the main season. The Museum enjoyed a very positive Easter holidays in terms of visitors, with strong numbers over Easter weekend and the week that followed. May half term was satisfactory although would have been aided by more frequent bad weather, the rain and thunder did not come at a time to suit! Outside of school holiday periods visitor numbers have dipped slightly. Visitor numbers overall for April/ May 2018 are almost on a par with the same period in 2017, just under 19,000.

Gallery Changes: Work has begun on a significant revamp of the Museum WRNS exhibition. The exhibition will feature some interpretation and artefacts from PHD's temporary 'Women in the Royal Navy' exhibition and give FAAM a permanent WRN's display more fitting than what we had displayed previously. The gallery

will be closed until completion later in 2018.

Cleaning Tender: The Museum has successfully tendered for a contractor to assist with day to day cleaning operations at the Museum. From the 1st of July, the Museum will be assisted by Norse Devon. Norse will provide specialist support and have vast experience delivering cleaning provision in similar complex visitor attractions in the region. The tender process started in February and saw the Museum receive interest from some 22 companies overall with 12 submissions eventually filed by deadline. It is hoped that the Museum will receive similar interest in the revised bridge repair tender, due to launch in late June 2018.

Events: Tours to Cobham Hall continue to be popular and to sell well. Tickets are £12 and available now from the Museum website and Ticket Desk. The next confirmed date 7th June 2018 has been fully subscribed for some time. Tickets are already on sale for dates later in 2018 which include 6th September and 6th December 2018.

The Museum hosts a Big Band Concert on Saturday 9 June under Concorde, tickets are available online at www.fleetairarm.com.

Air Day: The Museum will have a very different presence this year at Air Day (7 July). The Museum has taken the decision to locate its marquee adjacent to the restoration hangar, as well as locating static displays of aircraft (including the Wasp) within close proximity. The intention is to create a Museum corner and increase our presence at the event overall. SOFFAAM have been assured of a pitch within the new Museum marquee.

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.

Museum Café: The Museum is delighted to announce its transition to Vegware, for all disposable items within the Café environment. This includes disposable coffee cups (and lids), cutlery, take out boxes etc. This has significantly lowered the use of throw away plastics within the café area. Vegware are plant-based catering disposables, made from renewable, lower carbon or recycled materials, and can all be composted with food waste where accepted.

Vampire Cockpit: The Museum had secured £5,000 towards the Vampire project. However,

it was likely to need additional funding. After a brief discussion, the Chairman proposed that the Society should offer to support the project up to a limit of an additional £5,000. The proposal was seconded by the Secretary and carried unanimously.

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

Talks: The "Summer Special" will be held on 27 September in Swordfish; the subject will be Captain Eric 'Winkle' Brown's biography. The General Manager confirmed that the Swordfish auditorium would be available. It was pointed out that the AGM would also be held on that date.

Christmas Lunch: It was generally agreed that the Christmas lunch should be held in December. It was agreed to hold it on the 15th.

Visit to Bristol Aerospace: I did intend to take a group of members to the Bristol Aerospace in September, said Rosanne. However, with the next Jabberwock on 31 July it will not give sufficient time to get applications out and returned by 6 September. I propose to delay this until early November. Cost of the coach would be the same and from what I can see on the website, Senior entry fee will be £13.00 – although I dare say a group will be even cheaper

• The Membership Secretary

gave the following report:

Membership numbers:

Membership numbers continue to fall. Since the last meeting we have lost 15 and gained just 5. New membership applications are not making up the difference in 2018. Why? For the record, of the five new applications received since the March meeting, one has been downloaded from the web site and four are from the 'Join' leaflets in the FAAM

Promotional: We are awaiting the new updated banners to use in the FAA Museum and at events such as Air Day.

Updating the joining process:

To bring the Society up to date with modern payment methods, I have proposed that we should introduce payment by PayPal and emphasise acceptance of payment via BACS payments directly to our bank.

• *Any other business:*

The treasurer discussed the continuing use of cheques to pay Society bills. The existing process requires each cheque to be signed by two authorised signatories. After a brief discussion of business banking procedures, it was agreed that this was a matter for the continuing IT discussions.

The Secretary thanked Rosanne for forwarding a job description for the role of talks and visits organiser.



MEMBERSHIP

Annual membership is still only £12; Family membership only £32 (up to two adults and up to three children); and Life membership £180 or £90 for those over 60. It is very good value and makes a super gift for any occasion - including retirement. We are all volunteers and no money is wasted on salaries; it all goes to projects nominated by the FAA Museum. Encourage your friends and family to join and help to make the FAAM even better! If you would like to sign-up for Gift Aid, do let us know, 25% of your payment is gifted to us by HMRC. Similarly, if you would like to pay by Standing Order instead of by cheque (it saves you having to remember) let us know. Don't forget, you can also receive Jabberwock on-line if you prefer.

WANTED

The Society urgently needs a replacement for the role of Talks and Visits organiser - a role that has been filled for many years by Rosanne Crowther. A full Job Description can be found on our website, but as the title implies, the role is to organise speakers for our regular talks (ten a year) and also to organise occasional visits to places of naval or military interest. Readers of Jabberwock will have seen reviews of these events over the years, while the many members who attend will confirm that they are greatly enjoyable.

Rosanne will be more than willing to provide comprehensive briefings on the various aspects of this important voluntary role, on which we all rely. If you are interested, or know of somebody else who might like this rewarding position, please contact the Secretary, or Rosanne. Contact details are on page 2.

THE TONDERN RAID

By Ian Burns

The Tondern raid, officially designated Operation F7, was a British bombing raid mounted by the Royal Navy and Royal Air Force against the Imperial German Navy's airship base at Tønder, Denmark, then a part of Germany. Over the years much has been written about the Raid but, in my opinion, the accounts all rely on old recycled research. The raid was carried out from the

Williams. The Second Flight was Capt B A Smart, DSO, Capt T K Thyne, Lt S Dawson and Lt W A Yeulett. Thyne had to ditch with engine trouble before reaching Tondern, so the remaining six made the attack. None returned to the ship. Dickson and Smart ditched alongside a destroyer and were rescued, three landed in Denmark (all pilots later escaping to the UK), one pilot



HMS Furious in full dazzle camouflage in 1918

deck of HMS *Furious* on 19 July 1918, comprising seven Sopwith 2F.1 Camels, each carrying two 50 lb bombs. The First Flight comprised Capt W D Jackson, Capt W F Dickson and Lt N E

Walter Albert 'Toby' Yeulett crashed into the sea returning from the raid and was killed. The picture (**above**) shows HMS *Furious* in full dazzle camouflage, as she appeared at the time of

the raid. The aft landing-on deck terminates just aft of the funnel, as shown by the 'goal posts'. After a series of experiments the aft landing deck was never used operationally. The funnel,

(Below) HMS *Furious* at sea 17/18 July 1918. The seven Camels are lined up on deck in preparation for take off. All have had their national markings



A frequently-published picture of HMS Furious in July 1917, preparing to launch the raid

bridge and armoured director are essentially unchanged from her original battlecruiser design. Ahead of them is the forward hangar and flight deck. The wind break palisades are lowered, looking like fencing along the hangar sides. (*US Naval Historical Center, NH42236*)

painted over, the upper wing roundels with varying degrees of success. Each is installed on a Tail Guide Trestle (see *Jabberwock, No. 14, June 1985*). First and second Camels in the right hand file are Jackson (N6771) and Dixon; leading the left hand file is Williams' Camel (N6823). At this point Jackson's

Camel has a white nose with two horizontal dark bands. Photographs of this aircraft in Denmark show that these were painted over before take off. Dickson's Camel has a broad dark band flanked by two narrow white bands around the fuselage roundel. Smart flew the second Camel in

experiments over the foc'sle. During the morning a Camel, Pup and two 1½ Strutters were flown off, after which the ship returned to her mooring. The picture (**below**) shows the Camel, flown by Capt Thyne, taking off. The steam jet can be seen under the right hand wingtip. (**FAAM**)



4 June 1918 - Captain Thyne takes off from HMS Furious in his Sopwith Camel

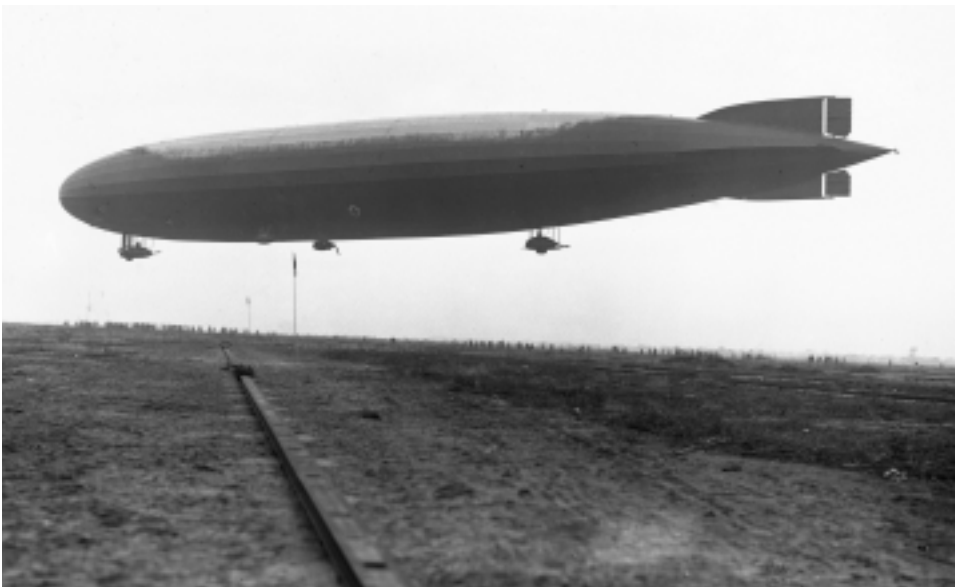
the left hand file and Thyne the third in the right hand file, identities of these and Dixon's aircraft are unknown. Third in the left hand file is Dawson's Camel (N6605). In the centre at the rear is Yeulett's Camel (N6753), its rear fuselage supported on a spar across the hatch coaming. The serials are confirmed by Danish Police reports. (**RAFM, P021792**).

On the morning of 4 June 1918, *Furious* sailed to conduct flying

(**Top of next page**) Tondern Base from the south in 1917, with L54 dropping ballast prior to being taken over by the ground party. From bottom to top: The Hallenschutzstaffel (base defence flight) aeroplane hangar which still exists, base accommodation, Toni (with partly camouflaged roof), Tobias and the double airship shed Toska with eastern doors open to accept L54. Commanded



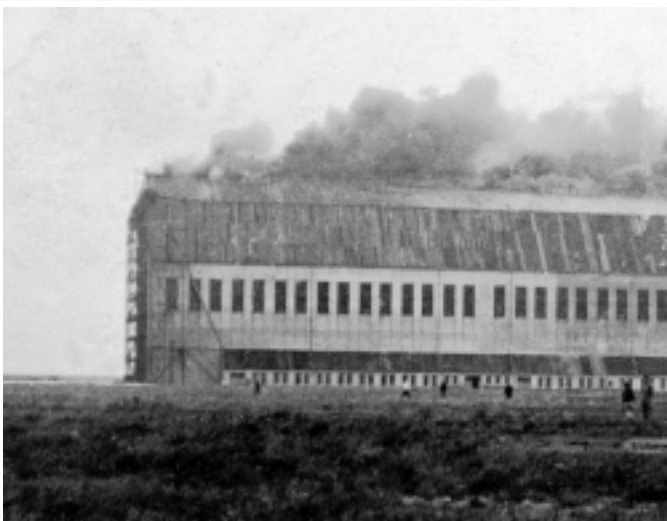
Tondern Base from the south in 1917, L54 dropping ballast



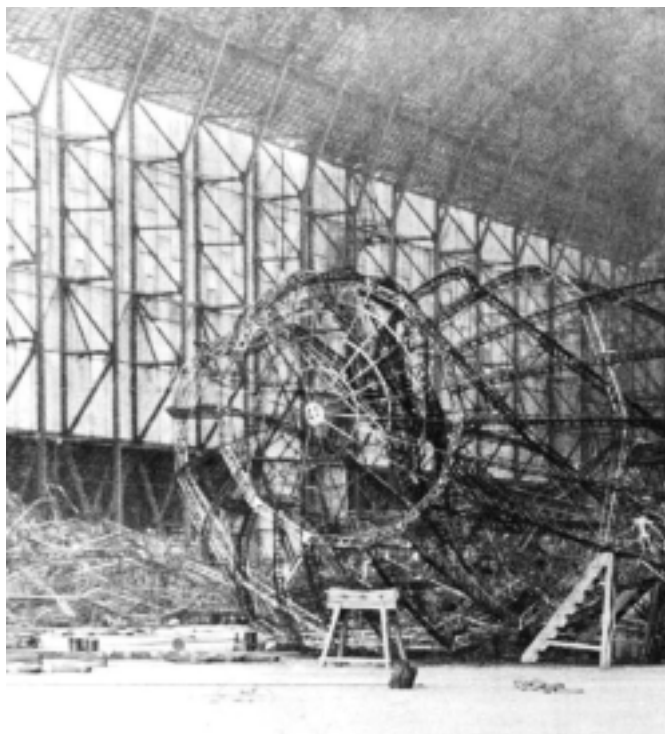
L60, fitted with Maybach MBIV engines, was based at Tondern at the time of the raid

by Kapitänleutnant Horst von Buttlar Brandenfels, L54 was based at Tondern between 5 September 1917 and the Tondern Raid, and performed 15 North Sea scouting flights and two raids on Britain, on 19/20 October 1917 and 12/13 March 1918. Toni had been demolished by the time of the raid and Tobias held an observation balloon, only Toska was being used operationally. The defence flight had been removed earlier in the year due to the poor condition of the airfield. The Gaswerk is just out of picture at the lower right corner. The town of Tondern lay about 2 km south of the base, and the village of Abel is marked by the wooded area above the airship. (Luftschiffbau Zeppelin GmbH Archiv, LZF 085-0005)

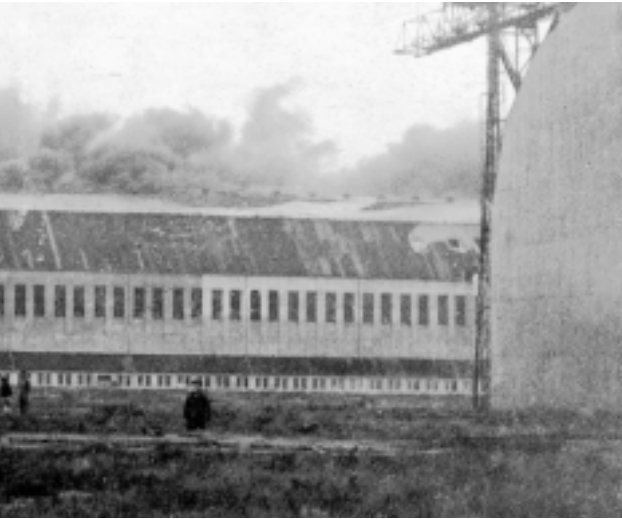
(Previous page, bottom) L60 was fitted with high altitude Maybach MB IVa motors. The airship was based at Tondern between 1 April 1918 and the Tondern Raid. Commanded by Kapitänleutnant Hans Kurt Flemming, L60 performed ten North Sea scouting flights and one raid on Britain on 12/13 April. Note the size of the



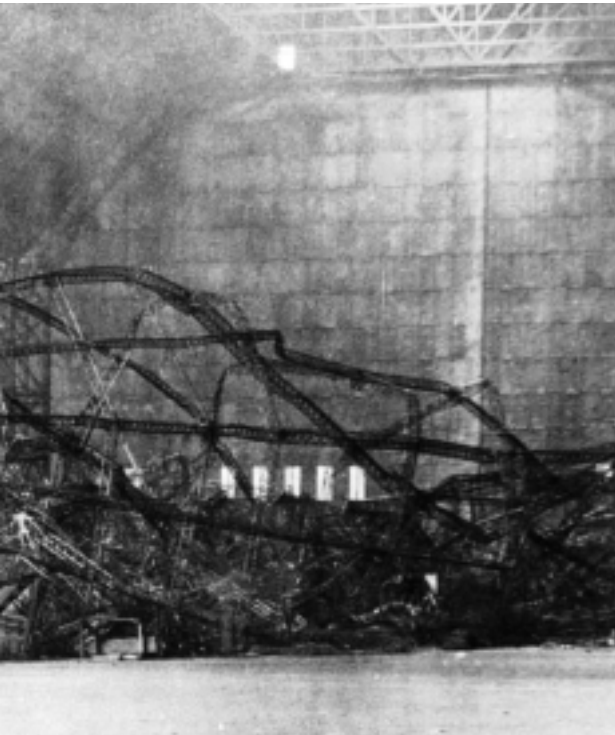
Shortly after the raid, smoke pours from



The burnt out remains of L54 (in the foreground) and L60



View from the roof of airship shed Toska



L60 in Toska. Note the lack of damage to the shed itself.

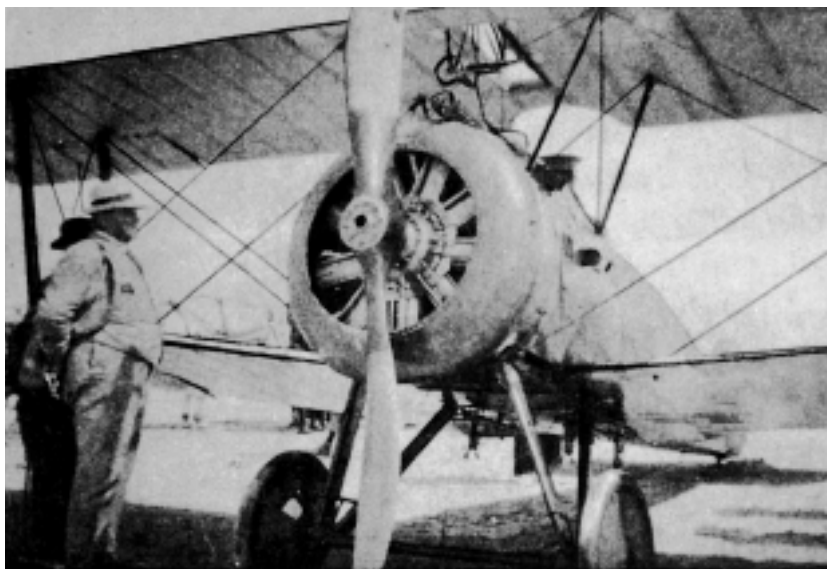
ground party. (*Bundesarchiv, Bild 134-B3160*)

(Centre, above) In a photograph taken shortly after the raid, dense black smoke pours from the roof of the west end of Toska. After the war, von Buttlar-Brandenfels claimed that the doors of Toska were open during the raid, and this prevented L54 and L60 exploding. As can be seen in this and other photos taken immediately after the raid the doors were closed.

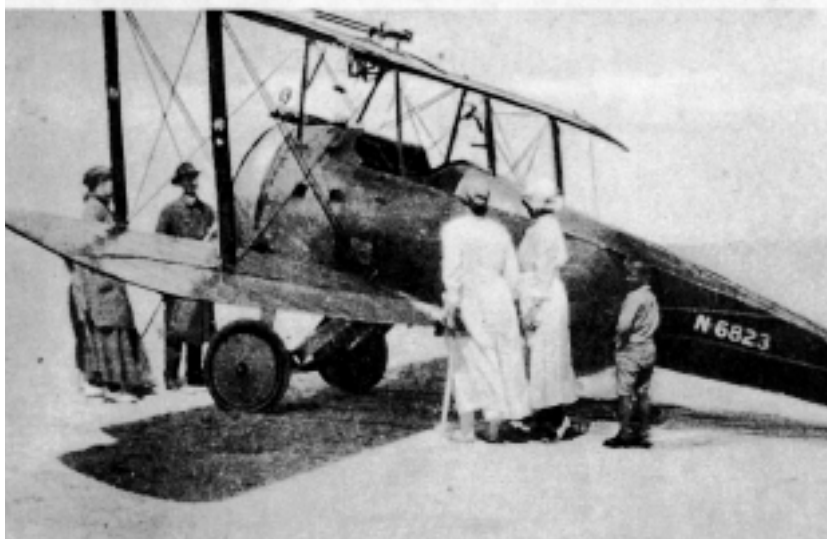
(*IWM, Q47941*)

(Centre, below) The burnt out remains of L54 (in the foreground) and L60 in Toska. Note the lack of damage to the shed itself.

(Overleaf) A postcard view of Williams' Camel which landed close to Blåvands Point lighthouse. The Camel is still fully armed, although the magazine has been removed from the Lewis gun. The upper view provides the clearest view of the bomb carriers used on the raid. In the lower view, between the two ladies and the young boy can be seen the over painted fuselage roundel. Jackson's Camel crashed on landing, and was set on fire, it was almost completely destroyed. Jackson escaped from internment in Denmark and returned to *Furious* on 14 August. Williams



EN FLYVER PAA STRANDEN VED
SKALLINGEN



The Camel of Lietenant N E Williams, which landed near Blåvands Point lighthouse

was able to make his own escape a few months later, arriving in the UK on 10 November. (*Blaavandshuk Lokalhistoriske Arkiv*)

in his wings and fuselage from anti-aircraft fire. Dawson quickly escaped from Denmark and returned to *Furious* on 5 August.



The Camel of Lieutenant S Dawson, at the village of Klegod, near Ringkøbing.

The last to land in Denmark was Dawson, at the village of Klegod, near Ringkøbing. This retouched postcard (**above**) is the best image available of his machine. Below and aft of the cockpit the bomb attachment fairings of the Bomb Carriers can be seen. The narrow white band around the fuselage was carried by three of the Camels of Smart's flight, all other national markings and serials have been painted out. From Danish Police reports we know that this Camel was N6605. The starboard wheel had been damaged and there were holes

Despite the loss of 'Toby' Yeulett, the Tondern Raid was a success, destroying two Zeppelins, L54 and L60, in their shed. It was the first attack, as opposed to a reconnaissance or interception, by naval landplanes taking off from the deck of an aircraft carrier.

This article is a summary of a much longer feature by Ian Burns. Part One appears in the summer 2018 issue of "Cross and Cockade", the Journal of the First World War Aviation Historical Society.



NEWS FROM THE HISTORIC FLIGHT



Swordfish 1 W5856 firing up

Navy Wings Supporters' Day 9 June 2018

Navy Wings Supporters' Days at HMS Heron serves to connect the many people and bodies who help to fund and generally assist the Trust, with the machines and personnel they help to underpin. They also provide a very good opportunity to showcase the veteran aircraft of the Royal Navy Historic Flight in front of what is a very special and informed group of spectators. Supporters' Day in June of this year took advantage of ideal weather for the flying display, enjoying fine visibility with sunshine but little glare. There was just sufficient low cloud for Lt Cdr Gotke in the Flight's T10 Sea Fury to disappear momentarily at the top of his aerobatic manoeuvres, before spine tingling high speed runs at low level across in front of the hangar.

The conditions were fine also for Swordfish W5856. Very little wind enabled this, the oldest of its type in the world, to perform those

an informal forum, enabling distinguished aircrew to reminisce on past experiences. Particularly impressive were the experiences



Sea Fury T20. VX281 on the apron. The CO, Lt Cdr C Gotke RN AFC ready to go

meticulous and stately low speed banking turns which the Swordfish always executes with such grace in front of its admirers.

of the former Fairey Gannet pilot, including his reaction to a worrying flameout of both his Armstrong Siddeley Mamba engines while on patrol.

Before and after the flying, two whole coach loads of supporters were able to enjoy the hospitality of the hangar with all the usual attractions of stalls, merchandise, displays of information and copious refreshments. The several former Fleet Air Arm members in attendance convened

There was something for everyone and the day reflects credit on the small band of individuals responsible for its organisation.

Well done, Navy Wings!

Report by Jim Humberstone



MONTHLY TALKS REVIEW

Summarised by Robert Heath

MAY 2018 TALK: “Design and Development of the Gloster Meteor” by Rod Dean, Aviation Consultant

This was the fourth different talk given by Rod Dean to SOFFAAM and I do hope it is not the last. Every one of them is so different from its predecessor, yet you know that it will be absorbing from beginning to end and lavishly illustrated throughout. The Gloster Meteor is a subject that will always grab my attention.

There is no accounting for taste and I might be alone in this, but I doubt it - of all the aircraft that have been created so far, the Meteor ‘does it’ for me

consistently. It has been a favourite of mine since I was a spotty lad running out the house to watch them on very short finals at RAF Tangmere. Ah, nostalgia is not

what it used to be.

We had a full-house again at the talk, requiring extra chairs to be squeezed in. The programme opened with a short but highly impressive B&W film from the 1950s showing a squadron of Meteor F8s taking off in pairs at five second intervals; two keeping low, the following two climbing out high, then two low, etc. In total 3,947 were built, in 34 variants and with 21 different engine types. It was a



First production Meteor DG202G at the RAF Museum in 2011. Note the tilting canopy. The ‘G’ designation meant that it had to be guarded at all times on the ground. Photo Nick - D

tough, durable aircraft, two of which are still in service 60 years later, with Martin Baker as test-beds for ejection seat development,

As we know, Frank Whittle

created one of the world's first jet engines in the 1930s despite being thwarted by the Air Ministry at every turn. At the same time, Germany was also developing jet power completely independently. Germans rightfully claim to have made the very first jet-powered flight, on 1 August 1939, in the Heinkel 178. The flight lasted just 10 minutes, limited by the very high fuel burn, but the aircraft was said to be capable of 435mph from its 1100lb thrust engine.

The main difference between the British and German engines was that Frank Whittle used a centrifugal compressor, in which the air drawn in is accelerated outwards and then compressed in chambers to convert velocity into pressure. This made use of known supercharger technology and was consequently robust and reliable. It enabled Whittle to keep the main shaft as short as possible to avoid "whirling" and results in a squat and rotund profile. The downside was that the engine has limited efficiency and thus low development potential. By contrast the German jet engine used an axial flow compressor, in which the air flows in a straight line through its multiple pressure building stages, resulting in a reduced frontal area. The design is more complex to manufacture, while limitations in metal technology and wartime shortages of raw materials meant it was much less reliable and had a short in-service life.

Although his engine was starting to show potential, Frank Whittle's company, Power Jets Ltd, was badly treated by the Government and the design was eventually given to the motor car manufacturer Rover to develop further. Progress was very slow under this arrangement and in November 1942 Rolls Royce stepped in to take over jet engine development. In exchange Rover was given the business of manufacturing the RR Meteor tank engine (a de-rated Merlin).

As the Whittle turbojet engine became a serious prospect, Gloster Aircraft was contracted by the Government to build two jet-powered aircraft to specification E28/39. The first of these, W4041G, flew successfully on 15 May 1941, powered by the W1 engine. It achieved 338mph, weighed 3,800lb and had a wingspan of 29ft. It was an effective technology demonstrator but lacked military capability. With the thrust currently available, Gloster concluded that a war-fighting aircraft would require two engines. That was how the Meteor (specification F. 9/40) was born. The engines were set at mid-length along the wing, giving easy access to them and allowing a short jet-pipe to minimise thrust losses. It also enabled the undercarriage to be set between the engines and fuselage. A serious shortcoming of this design is the limitation on directional control in the event of loss of one engine.

The tailplane was set high to be out of the way of the jet efflux. The first flight was on 5 March 1943 (Serial No. DG206/G) and the Meteor commenced operations with 616 Squadron on 27 July 1944, armed with four 20mm cannon and not six as originally envisaged. The Germans had come to the same conclusion about power and introduced the twin-engined Me 262 jet fighter, which came into service around the same time. They never met in combat, but how did the Meteor compare with the Me 262? The Meteor weighed 13,795lb; the Me 262 was heavier at 15,720lb. The Meteor's top speed was 420mph, whereas the swept-wing Me 262 was much faster at 559mph. Unlike the Meteor, the Me 262 required an engine change every 10-25 hours, whereas the life of the Meteor engine was closer to 180 hours. The first victory by a Meteor was the 'downing' of a V1 "doodlebug", not by gun fire, but by wing tilting the V1 into the ground.

Originally eight Meteor prototypes were built, mostly with a different pair of engines as insurance against any insurmountable difficulties with the Power Jet engines. These prototypes included: the Rolls Royce built Power Jets on aircraft No. DG205/G, the Rover built Power Jets on aircraft DG202/G which first flew on 24 July 1943 (after problems with turbine blades, resolved by RR). These engines had a thrust of 1,600lb. The next variant (DG206/G)

used de Havilland Halford engines and was the first Meteor to fly, in March 1943. These DH Halford engines later became the DH Goblin engine used in the DH Vampire fighter (originally to be called the 'Spidercrab!'); another, DG204/G, which first flew on 13 November 1943, had the Metropolitan-Vickers F2 (Metrovick) axial flow engines, which were very slim, but unreliable and fragile (later it became the Metrovick Beryl engine, flown in the Saunders Roe SR.A/1 jet flying boat fighter, and ultimately the Sapphire engine). Next came the Rolls Royce Welland, which became the Britain's first production jet engine, delivering 1,700lb thrust. The letter 'G' following the aircraft serial number denoted that the aircraft was to have an armed guard at all times while it was on the ground.

Twenty of the RR Welland equipped F1 Meteors were built. This was soon followed on 11 September 1944 by the Meteor F3, now predominantly equipped with the more powerful RR Derwent engines of 2,000lb thrust. 210 Mk3s were built. The F3 also had a sliding canopy in place of the earlier, rather odd-looking 'tilt' canopy. Interconnection of all fuel tanks was introduced so that in an emergency all fuel could be directed to just one engine. Jet engines were always thirsty and Meteor pilots kept an eye on the fuel gauge constantly. To this end the 325 gallons of fuel in the fuselage were supplemented

in due course by a ventral fuel tank holding a further 175 gallons. On the plus side, to the delight of pilots the Meteor had a trailing link undercarriage, which has a knuckle half way down each leg. This type of undercarriage is very forgiving and makes every landing look smooth - whether or not it is really. With the introduction to squadron service of the Meteor F4 in May 1945, the wings were shortened and 'clipped' to improve manoeuvrability.

Immediately after the end of the war, Britain's supremacy in jet propulsion was undisputed and a great deal of interest was being shown overseas. What better way to demonstrate than to beat the World Speed record? This was done on 7th November 1945 by Gp Capt Wilson at 606mph and then again a year later on 7 September 1946 by Gp Capt Donaldson at 616mph. In the meantime, Gloster, at its own expense, prepared a very striking, scarlet painted F4, civilian registered G-AIDC for demonstration purposes. However, following an accident while landing with a Belgian pilot, Gloster decided that a Company pilot must always be present during demonstration flights. Consequently, G-AIDC was rebuilt as G-AKPK and flew in March 1948 as the first two-seat trainer called the T7, still in its brilliant scarlet colour scheme (I remember it well at Farnborough Airshows). It was fitted with RR Derwent engines, now with 3,500lb thrust. In total, 650 T7s were built

and unsurprisingly there are records and photographs to show that it carried out aircraft deck landing trials. Rod Dean did mention that in his experience the rear pilot in T7 had a very poor view ahead and that the rudder pedal loads were huge when flying on one engine only.

The next development was in October 1948 when the FMk8 was introduced. Up until now, all Meteors carried lead ballast in the nose to keep the centre of gravity within limits. To improve performance and to accommodate new equipment, the Mk8 had its nose lengthened by 30 inches, ammunition was moved forwards and a 50 gallon extra fuel tank fitted in the space created. Ballast was therefore no longer required - they said. Having burnt off the extra fuel and expended the ammunition, not surprisingly the pilot was left with quite different handling characteristics.

Having settled on the Derwent range of engines, Gloster concentrated on developing the airframe for a very wide number of roles in addition to the standard F.Mk8 fighter, including the: FR.9 fighter reconnaissance (based on the F.Mk8); PR.10 photo reconnaissance; NF.11, NF.12, NF.13 and NF.14 night fighter variants (developed by sister company Armstrong Whitworth); U.Mk15 and 16 unmanned target drones; and the TT20 target tugs, (one of which is held in the FAA Museum's reserve collection in

Cobham Hall). At this point Rod Dean made no secret of his aversion to being a target tug pilot. The target was towed on a 600ft cable at around 180kts, necessitating a steep climb out on take-off and nerves of steel when attacks were made on the target itself.



Trials of Sea Meteor EE387 - these did not result in a production order

There were several additional Marks of Meteor beyond those more commonly known. This was due to the robust design of the aircraft and a very long talk could be given on the subject of variants alone. Let me try and list a few: engine test-bed; flight refuelling trials with Lancaster, Lincoln and Canberra tankers; radar test-bed for numerous companies and establishments; ejection seat trials, which commenced with the first live ejection on 24 July 1946, following which Bernard Lynch made a further 15 ejections in all.

Meteors are still in service today with Martin Baker who have enough spares to see them comfortably into the future. Other trials included weapons trials; prone-pilot trials, whereby an additional prone cockpit was added to the nose of a Meteor F.Mk8 (still to be seen at the museum at RAF Cosford); RR Trent

turbo-prop test-bed, which were very successful and required the undercarriage height to be extended to give sufficient clearance for the propellers; vertical take-off engine trials for the Shorts SC.1; The list goes on and on.

Not surprisingly export orders rolled in and the Meteor saw service with at least 14 countries from Argentina alphabetically through to Syria. Although it served in Korea it was easily outclassed by the newer MiG and Sabre fighters. At present there are still five flying world-wide. Long may they continue to do so. Tons and tons of facts, but never a dull moment in the way that Rod Dean presented and illustrated them. A splendid evening.





The group assembles under the stern of the SS Great Britain at the start of our tour. Photo Ernest Lear

We went below the waterline, to see the single screw and the revolutionary balanced rudder. We also saw at first hand the many rusted holes in the plating and marvelled at the de-humidification system that seems to be successful in keeping corrosion

Remedial action consisted in the installation of a glass plate across the dry dock at the level of her water line and the installation of a complex de-humidification plant that keeps the atmosphere below the waterline dry and clean. The entire vessel has been completely refurbished and the surrounding buildings fitted out as museums. These celebrate, not just the vessel but the genius of Brunel and his father Marc. The Thames tunnel, the Clifton suspension bridge and the Great Western Railway were among their many achievements demonstrated by modern audio-visual displays.

We saw the completely authentic replica steam engines and admired the massive chain drive that gave a three to one increase in propeller revolutions over the crankshaft speed. We toured the accommodation, which included a rudimentary hospital and ranged from the comfortable first class saloon to the cramped and unhygienic quarters for the steerage passengers.

at bay. And the cow? Our genial guide explained that, in those days before on-board refrigeration, live cattle, sheep, hens and ducks were all embarked on the Australia run, to be despatched and butchered to feed the passengers *en route*.

In this brief summary, it would be impossible to cover the entire experience in detail. The restoration and refurbishment work, which is still underway, coupled with the superb audio-visual effects, give an insight into Victorian life and travel on land and sea. Above all the entire experience is permeated with the spirit of that remarkable, irascible, chain-smoking genius, Isambard Kingdom Brunel. Thanks are due, as always, to Rosanne for her superb organisation; also to society member Philip Unwin for his witty and well-informed commentary (even though he never did reveal why the ship was entitled to wear the White Ensign).



FLYING IN THE 1950s - OPERATION GRAPPLE

By Brian Allen

At 86, I suppose I must be one of the 'lucky ones' but the memories are as fresh – well almost, as they were back then.

Having graduated at RAF Syerston on Prentice and Harvard, I was appointed to RNAS Lossiemouth to fly the T22 Vampire and aspire for a place in a Seahawk squadron. Alas, my 'air to air gunnery' let me down and a re-appointment to the anti-submarine course at RNAS Eglinton was balm to my somewhat dented ego. That was until my train crossed the threshold of the main runway and I saw a wreck of my 'new' type, a Fairey Firefly, short of the fence and threshold, firmly embedded in the mud of Lough Foyle. It occurred to me that I may well have jumped from 'frying pan into the fire'.

On joining 737 Squadron, I was delighted to discover that, satisfactory qualification in the art of hunting submarines would result in a front line appointment to the newly forming Fairey Gannet squadrons at RNAS Culdrose. This cheered me up as it would mean the much easier nose wheel landing approach to the new 'mirror' aid on a carrier, – altogether preferable to a tailwheel landing 'assisted' by a man waving a couple of 'bats' at you; --- but more about THAT later.

April 1955 saw me at Culdrose in 825 Squadron, still flying Fireflies as we awaited delivery of our brand new Gannets. Eventually the squadron was officially complete and we spent a happy summer working up to join HMS *Albion* and sail for the Far East. The Fairey Gannet was a delight to fly, smooth, reliable with single engine capability on either unit, and I thought it a gentleman's aircraft.

On return to Culdrose, 825 Squadron was de-commissioned. Another pilot and I were then appointed to RAF Watton to become the fixed wing element of Ships Flight HMS *Warrior*. Somewhat puzzled, we joined the RN unit there to find that we were to familiarise on the Grumman Avenger and eventually join the helicopter element of the Flight based at HMS *Daedalus* to work up and join *Warrior* in February for a special Operation Grapple in the Pacific! Whilst it was not classified as Top Secret, it was very much on a 'need to know' basis, and we just had to wait for further details about our involvement. The Ships Flight was to be the only aircraft unit embarked, comprising three Avengers and six Whirlwind helicopters and the appropriate crews.

At this stage, all we knew was

that it would entail flying an elderly, pre-war type aircraft weighing about 17000lbs, with a tailwheel, and landing on a small, (680 feet x 80 feet) straight deck, without a safety barrier, using a `batted landing` technique that I had fondly



One of the early Grapple test explosions of a fission bomb, air-dropped from a Valiant bomber.

imagined as history.

I can't say either of us was overjoyed. Dennis, my fellow pilot, re-joined after his de-mob in 1945, was a WW2 Seafire pilot, aptly called `re-treads`. He was even more concerned than I, having experienced such

landings. In retrospect, I think that he immediately made plans that involved a lot more hours being entered in MY Flying Log Book than in his.

At that moment, neither of us appreciated the uniqueness of the task or our place in history.

It was a vital link in the testing of three H-bombs that would establish the United Kingdom's atomic status in the World.

Familiarisation flying completed at RAF Watton, we joined the helicopters at HMS *Daedalus* and together formed the multi-task, seaborne unit that would link the target Island Malden, with the central base: Christmas Island. In the end, I think I was possibly the last operational `batted` landing in the Royal Navy, together with flying every communication flight and casualty evacuation. I look back now and can enjoy the adventure of all those flights.

Exuberant youth that I was, I never learned that valuable maxim about volunteering ---- DON'T! Deck landings, especially the pre-mirror approach ones, certainly focus a pilot's mind. After chasing, at 80 knots, a small carrier trundling along at 25 knots, it is a great relief to pass the little chap

frantically waving his `paddles` at you, and thump into the deck with that satisfying lurch to a stop that means you have landed in the wires and caught one. Only my Observer and Telegraphist could have been more relieved than me.

The predominant problem for Dennis and me was the lack of General Flying Practice once embarked. Our imperative task was to have a serviceable plane and pilot available after each drop, to transport the collected data as quickly as our lumbering Avenger could manage to Christmas Island. Our only flying practice was when there was an urgent requirement or we were based at Christmas awaiting the carrier to follow us up to the Island to recover us following a bomb drop. This usually enabled one or two days general flying practice until we were called back to `Mother`. This flying was a very popular pastime with the Canberra Squadron who kindly hosted us whilst ashore. They very rarely had the chance to enjoy flying in the first 500 feet above the Planet.

Strangely, Operation Grapple appears to have vanished from both military, naval and political historical records. There seems to have been little or no recognition of those servicemen and civilian scientists, oh, and the two ladies who courageously manned the NAAFI unit, who spent long weary months in fairly basic conditions sharing two small coral islands in the Pacific with several thousands of land crabs and

seabirds, the true owners.

There was, at the time, a very active protest group disrupting the UK, that wished to `Ban the Bomb` and all love one another, the latter concept having been unknown in the entire history of man.

Whilst I cannot imagine anybody welcoming an H-bomb, I think it represented power to our leaders, with the mistaken excuse, that if everybody had one, it would be a deterrent to its use. Thankfully true, so far.

I think that our politicians – alarmed at the potential public unrest and ever sensitive to their position, and periodically depending on a voting public, quietly decided to discreetly shelve Operation Grapple into a dusty obscurity.

However, on a personal note, the happy return to home, via the southern Americas, did offer preferential appointments, if available, to aircrew and at last I achieved my long held ambition to convert to helicopters.

Editor's Note: Although it was undeniably a long time ago, also not much discussed today; any student of the independent development of Britain's nuclear deterrent will know the enormous significance of Operation Grapple, which demonstrated a series of development bombs, culminating in a genuine fusion (so-called hydrogen) bomb.



ALPHA TO ZEBRA (NO OMEGA)

Evolution of the phonetic alphabet - by Bill Reeks

My memory was stirred by a BBC Radio 4 talk about the evolution of the phonetic alphabet, familiar now to many walks of life. 63 years ago, on December 1st 1955 the alphabet devised during World War 2 to harmonise communication among the Allies was superseded by the present one. When I began training as a Fleet Air Arm observer at the end of 1941, the Army used Ack Ack Beer Beer etc while the RN and RAF used Apple Beer Charlie etc. The classic wartime film "Target for tonight" featured F for Freddie - the call sign for the Wellington Bomber. F for Foxtrot somehow wouldn't seem as fitting. Early attempts to formalise a phonetic alphabet used long words, perhaps because of poor reception. Names of cities were favourite: I have a list in a 1938 Handbook for Wireless Operators, giving A for Amsterdam, B for Baltimore, C for Casablanca etc. I like X for Xanthippe! The only one that lasted was Q for Quebec. Another attempt used first names – Andrew, Benjamin, Charlie etc. G for George, H for Harry and Q for Queenie lasted well.

The new alphabet in 1955 was devised by an international

committee, to include countries whose inhabitants found some words difficult to pronounce. Now that commercial airliners were beginning to span the globe this was inevitable. Except for internal flights, all air to ground communication is in English. Just as well - as a nation we are notoriously bad at languages. In 1943 I was posted to 852 Squadron flying in Grumman Avengers. My aircraft was 2BH. Our crew decided that Two Baker How was uninteresting so we reverted unofficially to the old Two Beer Harry. Now we could do something with that for our nose art!

The BBC programme noted that there had been plans to change certain letters, notably Echo to Epic and November to Nectar. (Didn't it used to be Nuts?) There must have been many airmen in the sky on the 1st December 1955 who, when transmitting on their radios, found that they had to suddenly change to a new call-sign. This brings me to my personal interest. In 1955 I flew a Percival Proctor from UK to Australia (some members may remember my SOFFAAM talk in 2002). On 1st December I left Paya Lebar Singapore airport en route to Indonesia. I called

Djakarta for permission to land. My callsign George Able How Fox Uncle after constant usage tripped off my tongue like a familiar line

and have no alphabet as such, which must pose problems, though it doesn't seem to hold them back. It is truly remarkable that our little



Regrettably, a search of the archives reveals no record of Bill's talk in 2002. Those who attended his entertaining re-telling of his wartime exploits, entitled "Down in the Drink" in 2015 will remember this picture, which shows him (second from left) being interviewed by the Captain of the rescue ship USS St George after his Avenger was shot down in April 1945

of poetry. No response from Djakarta, so I then read out from my prepared notes the unfamiliar Golf Alpha Hotel Foxtrot Uniform, which did not trip easily from my tongue. Djakarta then deigned to acknowledge my presence. Relations at that time between U.K. and Indonesia were strained. Some countries, notably China and Japan use "picture writing"

island on the edge of Europe has given birth to the only universal language on the planet. On a lighter note, I can still remember from way back a spoof alphabet starting with "A" for 'Orses. Does anyone out there remember it?

Lastly - why don't we say "Romeo" instead of "Roger" when acknowledging a message?

