Jabberwock

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

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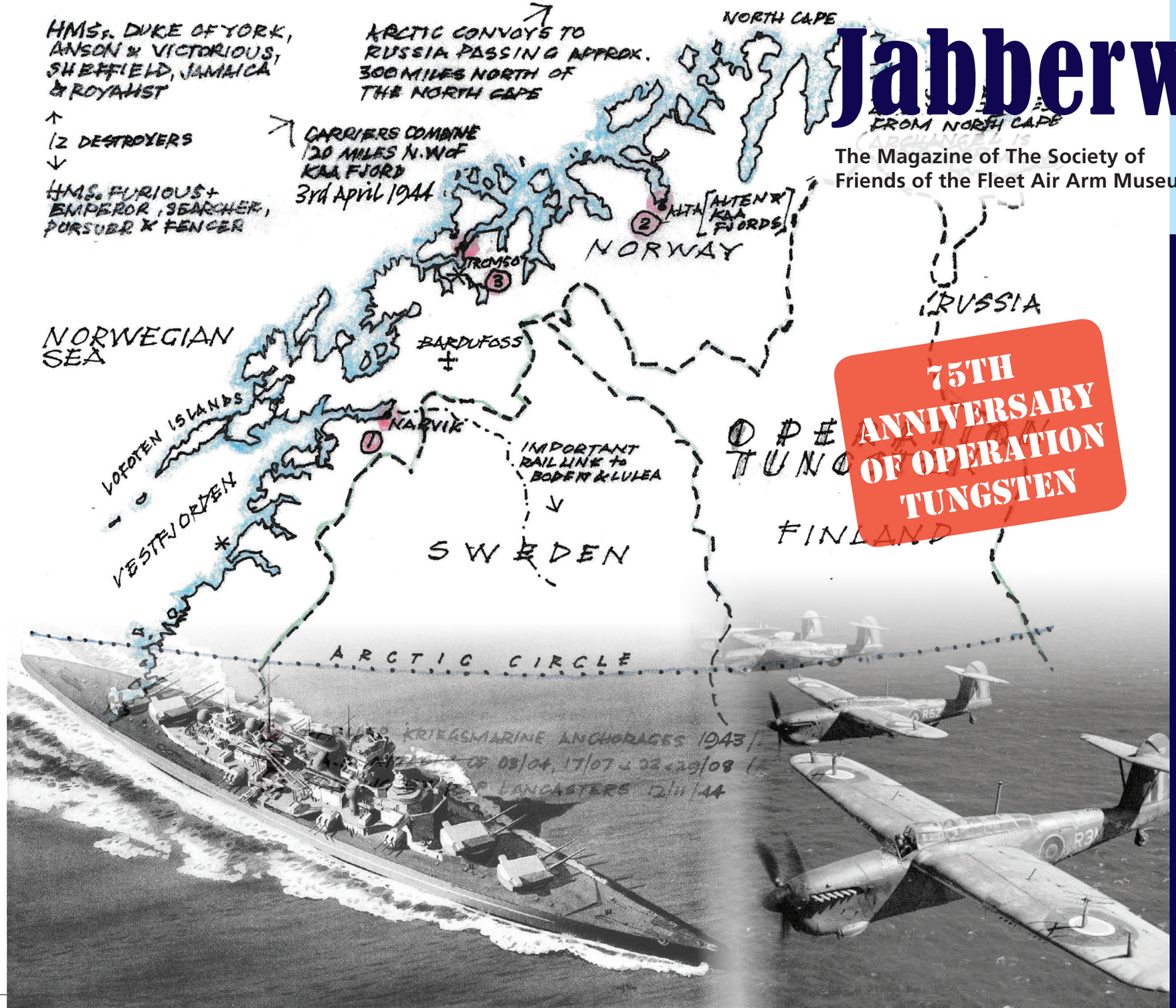
May 2019



75TH ANNIVERSARY OF OPERATION TUNGSTEN

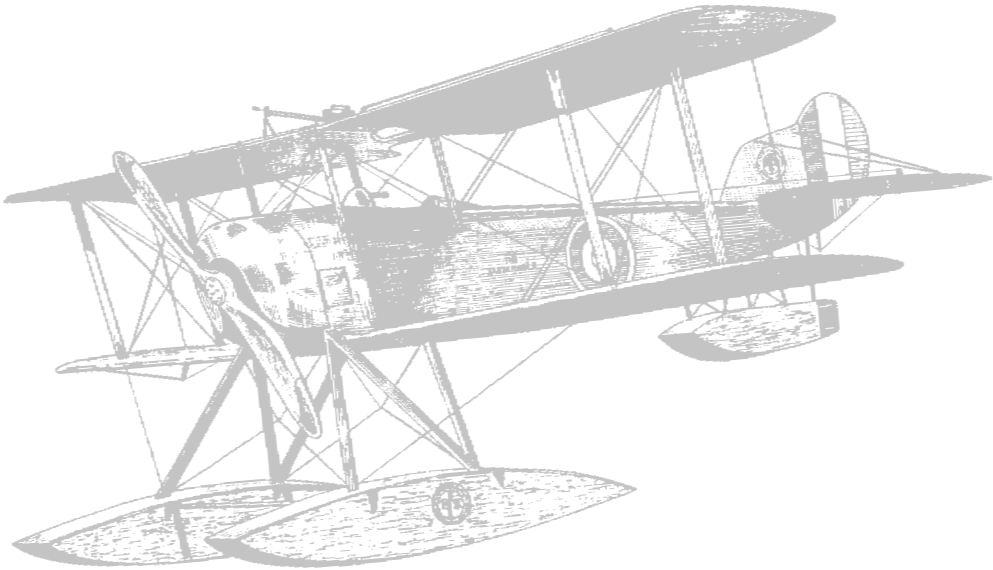
SOCIETY OF FRIENDS
FLEET AIR ARM
MUSEUM

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



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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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Main picture: Situation map of the TUNGSTEN operation, by Jim Humberstone

Bottom left: Model of SMS Tirpitz at full speed

Bottom right: A flight of Barracudas

EDITORIAL

This issue of Jabberwock celebrates the 75th Anniversary of Operation TUNGSTEN, the Fleet Air Arm's overwhelming attack on the German battleship SMS *Tirpitz* in April 1944. This was the last major airborne attack by the Royal Navy in home waters before the nascent British Pacific Fleet's January 1945 attacks on Sumatra in Operation MERIDIAN. Although the operation did not succeed in sinking the ship, *Tirpitz* was put out of action for several months, We carry an abridged version of a formal report on the operation by Australian Lieutenant (later Professor) David Brown, an observer who took part in the raid. The illustration shows Professor Brown in later life. We are grateful to member Peter Rickard for bringing this report to our attention.

Also in this edition, you can catch up with the latest news on the restoration of the Museum's Barracuda, which details the painstaking efforts going into making this as truly representative of the original as possible.

In February, our Chairman, Graham Mottram gave a talk on the operations of the Royal Naval Air Service (RNAS) during the Gallipoli campaign in 1915. This talk drew on a long historical article by Graham, of which we carry an edited version. The article reveals the almost total lack of preparedness of the RNAS for this type of deployed operation, both in equipment and organisation; hardly surprising, since the Service itself was only a few years old and aviation of any sort was in its infancy.

We provide the usual forecast of monthly talks and regret that the passage of time between the issue of the magazine and the date of the talk means that, on occasion, the talk delivered is not the one advertised. We draw your attention to the notice on the talks page, advising those who plan to attend the talk to check on the Museum website, which is regularly updated.

Attentive readers of "snippets" from Council meetings will have noticed that our President, Gordon Johnson, has expressed his intention to stand down from this position. This will become effective at the next AGM, although Gordon is planning to move to Hampshire before then. Gordon was a long-standing Society member and for many years he was the Society's highly conscientious Treasurer. We wish him and his wife Rosemary a long and happy retirement.

LETTERS TO THE EDITOR

Hi Malcolm,

Jabberwock 94 just to hand and I read the comment about whether the Sopwith Baby was still relevant with a wry smile on my face. Now memory is a fickle friend, so Graham may be able to correct or confirm the following as he was there as well. At the meeting they formed the Society (OMG! Was it really in 1979!) in addition to the local volunteers and interested people there was a small band of quite vocal WW1 enthusiasts. Like miscreant children I recall we all were seated at the back of the room. Now I am certain that the proposal to use the word Jabberwock for the Journal and, hence, the Sopwith Baby for the Society emblem came from us.

I have just checked the old newsletters – The first three were on stapled paper sheets – and in the second one (April 1980) were two proposed logos for members to vote on. There was a questionnaire of which I do not have a copy – I must have filled it out and sent it in. The third News Sheet had the now familiar Jabberwock image in its original, not stylized, form. Regrettably, Cyril Tubb referred to the Baby as a Pup. Ah well, you can't win them all. It should also be remembered that at that time the Baby was front and centre when you entered the museum. After 40 years, perhaps a rethink might be worthwhile. But, you know where my vote will go.

Best regards

Ian Burns
Founder Member 46

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Malcolm

Here's my regular feedback of your very informative magazine.
In Ian Burns' letter that included a more appropriate photo of a Short 184, he failed to point out that the photo depicts the very first Short 184 built, serial number 184, that Shorts adopted as its type number for the series. On page 14 and the description of the US hostage rescue event, this sounds remarkably like the events depicted in the film Zero Dark Thirty that led to the killing of Osama bin Laden where one of the still classified US Special Forces stealth versions of the UH-60 Blackhawk hit the compound's surrounding wall during the assault, although this assault took approximately 15 minutes to complete. On page 16 of the summary of the Nov 16 talk and the number of squadrons at the height of World War 2, 40 seemed nowhere near enough when you consider that there were 60 squadrons just operating the Fairey Barracuda! It also depends when the

'height' of WW2 was. My estimate would be at least 150 squadrons in mid 1944 if you remember there were 100 squadrons in each of the 700 and 800 series, plus those in the 1700 and 1800 series.

Tony Jupp

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Hello Malcolm

Thank you for 'Jabberwock' No.94, as usual a most welcome arrival and interesting read. The article by Chris Howart (61 years of the FAA) took my notice. In it he mentions working with Cyril Meek (Sea Venom Observer). I think this might be the same Lt C A Meek we had in HMS *Centaur* in 1959/60. Lt Meek was a observer on 891 Squadron (Sea Venoms) who was unfortunately killed with his pilot Lt. Ogilvy when their aircraft failed on a catapult launch and went straight over the bows. Their names are on the Wall of Remembrance at the National Arboretum under the year 1959 or 1960.

In his article he also mentions the SS *Melika* incident, in which 845 Squadron with Whirlwind helicopters was involved. I joined 845 at RNAS Culdrose after they returned from HMS *Bulwark* prior to their joining HMS *Centaur.* The squadron was awarded the Boyd Trophy for their work in saving the crews from the stricken ships. The ceremony for awarding the trophy, and a Westland Trophy, was carried out at RNAS Culdrose - I have an excellent official photo of same.

Unfortunately, the Whirlwind had difficulty staying airborne - their hydraulic clutch kept failing and they crashed. We joined 824 Squadron (Whirlwinds) at Culdrose and kept two Whirlwinds hovering over the airfield for 24 hours a day until one crashed. Meanwhile we carried on maintaining the other 845 and 824 Whirlwinds ready to join HMS *Centaur* for her second Commission as their Anti-Submarine Warfare (ASW) squadron. This was to replace the Skyraiders of 849D Squadron, which were being withdrawn for return to the USA.

One of the Whirlwinds crashed and no quick answer to the problem could be found. An ASW squadron was desperately required for HMS *Centaur,* so 845 was disbanded and re-formed as 810 with ASW Gannets. The squadron was formed in record time, with the Gannets being drawn from storage at RNAS Abbotsinch (now Glasgow Airport). Fortunately most of the maintainers were ex Gannet men, so not a lot of retraining was required. Six aircrew of 845 Squadron who transferred were also ex Gannet men. *Bulwark's* Captain P.F. Gick became HMS *Centaur's* Supply and Secretariat Boss.

I hope this is of some interest, especially for Chris Howat on what happened to Lt Meek. As you can see, the whole article jogged many happy memories and related stories.

Derek Poulton

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SNIPPETS FROM COUNCIL MEETINGS

From the March Meeting:

• *The General Manager gave the following report:*

Capital Works. I mentioned as part of my last report the appointment via tender of a contractor to replace the Bomb Lift in Hall 3 (Carrier) and also the imminent tender of our Hall 2 roof replacement project.

The Museum has appointed Ikonic Lifts to install the new lift in Hall 3, the work should commence in April and lift operational in June.

We are currently conducting consultation visits with contractors as part of the Hall Two Roof Tender. This is a significant project for the Museum and we are hopeful that we can commence the works in around June time. Many contractors have shown interest in this project and it is hoped the tender process can lead to a successful appointment to help take this work forward.

Events. Tours to Cobham Hall continue to be popular and continue to sell well. Tickets for the next tours on the 7th of March sold out in January.

The Museum has decided to 'double up' Cobham tours in 2019. The usual format over the last 2 years has been to host three tours per day on the first Thursday in June, September, December and March. From June 2019, we will host tours on Thursday and Friday to try and respond to demand. Tickets are £15 and available now from the Museum website and Ticket Desk.

The Museum sees the return of our Cinema Experience on the Flight Deck on the 23rd of March. Our partners, Starlight Cinema have decided to trial Bohemian Rhapsody after the success of the film across the country. Visit http://www.starlight-cinema.co.uk for more information.

We have hosted more than a dozen sell-out evenings based on Top Gun, the release of the sequel in July 2019 will see several dates added this coming winter for the new film.

June is a busy month for the Museum as we also host the annual Big Band event under Concorde and 'Moto Fest' in partnership with the Somerset County Council's road safety team.

Please visit the Museum website at www.fleetairarm.com for more information unless otherwise stated.

Concorde 50. The Museum has lots of events planned to mark this anniversary. This includes short talks on Concorde almost every day between 2nd March and 9th April led by our knowledgeable volunteers. On the 9th April, to mark 002's first flight, we will also host in partnership with Aerospace Bristol at the Filton site (home of Alpha Foxtrot, last British Concorde), a combined group visit that offers members a unique and

rare opportunity to view Britain's first Concorde in flight and last in service. SOFFAAM members are invited to join this event if they wish, more details at the following link: - https://tickets.aerospacebristol.org/WebStore/shop/ViewItems.

The Museum will also offer 50 Concorde themed goody bags to the first 50 children that visit the Museum on the 9th of April during half term. One goody bag will contain a golden boarding pass and the chance for a family to visit the Concorde Cockpit.

• *The Chairman gave the following report:*

He had recently attended the FAAM Advisory Committee, at which there had been a discussion of various developments of the FAAM. The General Manager asked if the Council had made a decision on the Memorial Book. The Chairman replied that we had already agreed that it should be archived.

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

Speakers have been booked up to November 2019, including the sale of Navy Wings memorabilia at the talk on 28 November.

Visit to Aerospace Bristol 16 May, 2019: At present there were 44 acceptances. This led to a brief discussion as to whether members who went direct to Bristol would have to pay for the coach. There appeared to be agreement that there was only one price for the visit, to be paid by all.

Proposed visit to Navy Wings on either 18 or 25 July. There was a brief discussion on cost, as Navy Wings generally expected a donation. It was agreed that a cost of £20 per person would be acceptable.

The cancellation of the January talk because of snow had caused some annoyance to members. Re-arrangement of speakers had also led members to arrive for a talk to be disappointed to find that the speaker was not as advertised. The Secretary agreed to post a cautionary notice in Jabberwock to warn of possible last-minute changes.

• *The Membership Secretary gave the following report:*

Membership numbers - Yet again, membership numbers continue to fall. Since the last meeting the number has fallen by 6 (14 lost and gained 8). Of the 8 new applications received since the December meeting, 5 have been downloaded from the web-site and 3 from 'Join' leaflets picked up in the FAAM. We have gained two new overseas members, which is encouraging, but the persistent trickle of departures is not being stemmed.

• *Any other business:*

There was a considerable discussion of Council members' responsibilities under this heading.

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MONTHLY TALKS REVIEW

Summarised by Robert Heath

March 2019. "From Kitty Hawk to Cape Canaveral and beyond" by Wing Commander Tony Davies RAF (Rtd)

What an evening, what a talk! Seemingly wafting from one subject to another, but in fact it was very structured and cast its net over one element, then another, then linked back to the first. Tony was very entertaining, informative and used plenty of humour. You should have been there! The first point he made was that an essential to flying in the early days, was a green field, for a soft landing. There were an awful lot of crashes, but very few were fatal. Next came wise words from the Greek poet Homer, whom you are free to look up, followed by down to earth wisdom from Carol Ann Duffy addressed to Mrs Icarus (wife of the man who flew too close to the sun and foolishly melted his wax wings):

"I am not the first or last
to stand on a hillock
watching the man she married
prove to the world
he's a total, utter, absolute, Grade A pillock"

So, the scene is set. Who was the first to fly successfully? Tony fleetingly took us to consider innumerable 'inventors', the most prominent of which included: Leonardo da Vinci, who devised a helical screw helicopter, flapping wings and doubtless other concepts, but none of which are known to have progressed beyond the drawing board; Sir George Cayley, in the early 1800s, is credited with being the first person to understand the underlying principles of flight. Bold fellow that he was, he instructed his coachman to make the experimental flights in his creation. (In an aside, Tony assured us that Sir Richard Branson piloted a replica of the Cayley glider.) John Stringfellow was prominent on the list, not because he based himself in the centre of the known universe, otherwise known as Chard, Somerset, but because he recognised that successful, sustained flight would require an engine. To develop this, in the mid-1800s, he worked with William Samuel Henson and they built a 10ft wingspan model complete with a steam engine, that flew straight and level for 30 yards; Otto Lilienthal came to prominence in the later 1800s as the first person to make successful flights with gliders. By 1896 he was working to develop more control when his glider stalled at around 50ft and he died. Finally, in 1903, two American engineers made what is said to be the first controlled, sustained flight at Kitty Hawk, North

Carolina. Orville and Wilbur Wright entered their names in the history books. There is not a shadow of doubt that they worked very hard in planning and developing their 'Wright Flyer' and used their engineering skills and business knowledge to make it a success. For example, they built a small wind tunnel to test and refine the wings and propeller shapes, also they sought guidance from the US Met Office equivalent to establish the best locality to undertake the tests. They travelled 530 miles as the crow flies from Dayton to Kitty Hawk. (It so happens that Kitty Hawk is not a million miles away from Roanoke, where the first British settlers made home in 1585.) The first powered flight was a short hop, but the fourth lasted 59 seconds. To turn that into reality Tony counted-down the time and put us in the position of Wilbur Wright sitting at the controls. It is a lot longer than you think.

At this point, Tony also reminded us that around 60 years after the Wright Brothers made history, another American, Neil Armstrong was the first man to set foot on the moon. From that point onwards, the collective aviation-imagination went into overdrive with some very strange shapes emerging, for example, the Langley "Great Aerodrome", a bizarre avant-garde machine, designed to be launched from a floating platform (it crashed). The Brazilian, Santos-Dumont created numerous aerial vehicles, some of which had the 'tail' at the front which was unorthodox at the time, but is now unexceptional; and so it went on.

Aviation meetings blossomed in Britain and the rest of Europe around 1909 and then along came WW1, which accelerated development, practicality and the technology of aviation in the way that war always does - for every plus, there is a negative. Post war, the world was flooded with redundant aircraft and pilots, many of whom took up a nomadic lifestyle to present aviation to the public via the thrills of 'barnstorming'.

Aviation development did not stop with the war. The desire for ever increasing speed was incentivised and enhanced by Jacques Schneider, a French business man, who sponsored the Coupe d'Aviation Maritime. Ultimately this Schneider Trophy was won by the sleek, very purposeful Supermarine S6B in 1931. In that last race, the Italians suffered engine problems with their similar looking Macchi and they were unable to compete. Frustratingly for them, it is reported that their aircraft subsequently flew faster than the S6B.

Meanwhile, aviation business ambitions looked to ways of transporting people and earning money in the process. I don't suppose at that time the old adage had been invented that 'If you want to make a small fortune in flying, you need to start with a big fortune'. Consequently Tony illustrated many examples of

passenger aircraft, most of which did not go far beyond the prototype. They were interesting aircraft, e.g. the Tarrant Tardot, a massive tri-plane which I cannot recall if it crashed before it took off, or crashed after; the delightful and successful Handley Page HP42 and HP45 passenger aircraft - so graceful; the Junkers G38, which was very novel by seating passengers inside the very thick wings, which were glazed to give some of the passengers a truly grandstand view. Also novel was the fact that mechanics were able to service the engines while in flight! The Brabazon was also featured, but I have always found it a rather sad aircraft, so obviously created by a committee. Also very much in the news at the time were flying boats, the theory being that suitable airports extending across the world were simply unavailable, whereas lakes and oceans abound. This led to such designs such as the enormous Dornier DoX; delights such as the Saunders Roe Princess - built after its time; and of course the Howard Hughes Spruce Goose. Credit where it is due though, Howard Hughes was also behind the creation of the beautiful Lockheed Constellation. Oh, so sexy.

World War 2 saw the transition from the creative peak of piston engine development through to the jet engine. So, we were shown details of the Lancaster (bomb load up to 20,000lb), B17 Flying Fortress (bomb load typically 8,000lb), Mosquito and Junkers 88, each of which made a distinctive mark during the war. From these came the Shackleton and Boeing B29 Superfortress, but already jet aircraft were emerging to render these giants outdated, although in both cases we were able to enjoy the sight and sound of them for many, many years to come.

Tony showed us a cartoon made of him in the 1960s when he was flying Vampires in the RAF. He noted the date and pointed out that it was roughly sixty years from the Wright brothers first flight and it is now almost sixty years since the cartoon was drawn. In the last sixty years, technology has bounded forward and computers are now used to create and control systems that could not even fly without their input. We have seen Concorde come and go, Space travel with unmanned vehicles to distances we find hard to imagine, the Harrier has come and gone, helicopters, including the Osprey types are now so capable and versatile, yet drones have opened up a future with even further options on capability and versatility. Where will it stop? I would guess that all the time a fuel is there and money to be made, it will not stop.

Thank you Tony Davies for reminding us of so many events in the development of flying and feeding our minds with a thought provoking future. How will it look in another 60 years? I won't be here, but some of you will and you will be amazed.

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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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Thursday 16th May 2019
VISIT TO BRISTOL AEROSPACE MUSEUM

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Thursday 30th May 2019
Mr Tim Prince OBE, FRAeS
"The Royal International Air Tattoo – from small beginnings"

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Thursday 27th June 2019
Paul Beaver
Naval Pilots in the Battle of Britain

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Thursday 25th July 2019
Captain Rory Smith
Trinity House

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Thursday 26th September 2019
AGM Followed with a talk by
Jack Froelich – KC-35 Operations

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Thursday 31st October
Candida Atkins talks about her mother
Jackie Moggridge, ATA Pilot

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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. *Whilst the Society makes every attempt to adhere to the published programme of lectures, there are occasionally factors such as weather or short notice unavailability of speakers which could force a change of programme. We recommend that members check our website and the booking section of the FAAM site*

MEMBERSHIP

Standing Order Membership cards enclosed for May, June and July.
(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:

3634 Mr R. Sargent	Dorset
3635 Mr S. O'Sullivan	Hong Kong
3636 Mr L. Hayward	Middlesex
3637 Mr L.A. Deglmann	Germany
3638 Mr H.C. Lawson	Isle of Wight
3639 Mr R.L. Tonkin	Devon
3640 Mr C. Willmott	Somerset
3641 Mr E. J. Davison	Cheshire

Total members: 1022
Members who have made a Gift Aid declaration: 719

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.
Let us know if you would prefer to receive Jabberwock via your e-mail.

OPERATION TUNGSTEN

By Professor David A. Brown

Lt (A) David Brown in 1944

This article is drawn from a much longer fomal documentary report by Professor Brown, kindly loaned to SOFFAAM by member Peter Rickard.

Operation TUNGSTEN was principally a Fleet Air Arm action against the German battleship *Admiral von Tirpitz* at Kaafjord, northern Norway on Monday, 3 April 1944. (The fjord is a minor inlet at the southern end of Altenfjord, which opens some 35 nm northwards into the Barents Sea.) The operation was described in the Admiralty's Battle Summary No 27 of November 1944. The first paragraph of this (then) Top Secret document vividly summarizes the two strikes by the Fleet Air Arm under the overall command of Lt Cdr R S Baker-Falkner, DSC, RN (for which he was awarded the DSO) as follows:"Monday, 3rd April, 1944, was a red letter day for the Naval Air Arm. On that day powerful forces of bombers and fighters (12 FAA Squadrons and 200 Aircrew) attacked the German battleship in her strongly defended anchorage at Kaafjord, mauled her severely, and returned to their carriers, having lost but three of their number."

Tirpitz had been damaged in Kaafjord by Royal Navy midget submarines (X-craft) during September 1943, and since then had not moved, but it was believed that temporary repairs had been completed by March 1944. Although the ship was probably not 100 per cent fit for operations, it constituted a potential threat to the north Russian convoys and also to the allied convoys crossing the Atlantic for the D-Day build-up in the United Kingdom. It was therefore highly desirable to put it out of action again.

Tirpitz had a service

displacement of 52,600 tons, with a main armament of eight 38 cm (15 inch) cannons in four twin turrets, each gun firing 800 kg shells. Additionally, the ship mounted a formidable array of secondary armament including 12 x 15-cm guns in double turrets, firing 45 kg shells and numerous anti-aircraft weapons. The horizontal protection of the ship's lower-deck armour ranged from 130 to 150 mm, while the citadel with its armoured transverse bulkheads up to 220 mm thick made *Tirpitz* a virtually unsinkable fortress. Nonetheless, the 26.1 tons of high-explosive bombs expended by the 40 Barracuda II dive-bombers took "the Beast" by complete surprise that day.

The ship's berth was known to be strongly defended by nets, AA guns, flak ships and smoke-generating apparatus. To support the battleship, five Narvik class destroyers were stationed at Altenfjord and a considerable number of submarines, normally employed against the north Russian convoys, were maintained at Narvik, Hammerfest, and other northern ports. The air forces based in the immediate neighbourhood were small, but they could be rapidly reinforced in an emergency.[1] The operational planners of the RN's attack decided to synchronize the operation with the passage of an outward-bound north Russian convoy, in order to minimize the risk from U-boats (which would certainly be attracted by the convoy) and also to give the surface forces a good chance of making their advance undetected.

On 30 March 1944 the TUNGSTEN units sailed from Scapa Flow. They were split into two forces, of which Force 1 consisted of the Battleships HMS *Duke of York* (Flag, C in C Home Fleet, Admiral Sir Bruce Fraser) and *Anson* (Flag, VA2 HF, Vice Admiral Sir Henry Moore), the fleet carrier HMS *Victorious*, the cruiser HMS *Belfast,* and numerous destroyers. Force 2, under Rear Admiral Bisset, consisted of the cruiser HMS *Royalist* (Flag, RAEC), the fleet carrier HMS *Furious*, the escort carriers HMS *Searcher, Pursuer, Emperor*, and *Fencer*, the cruisers HMS *Sheffield* and *Jamaica,* with a substantial supporting force of destroyers and oilers. Between them, the ships' companies of the two Forces exceeded 15,000. Force 1 steered north-eastwards to provide cover for Convoy JW58. Force 2 left Scapa later that day to a position off the Faeroes. By the morning of 1 April it was clear that the convoy, though shadowed intermittently by hostile aircraft, was making satisfactory progress, and had indeed inflicted casualties on both aircraft and U-boats, without itself suffering any damage. No other enemy air reconnaissance,

1. ***In fact, the Luftwaffe played no active role against any of the 1944 FAA attacks against Tirpitz.***

apart from routine meteorological flights, was taking place.

The air component of TUNGSTEN was under the command of Lt Cdr R S Baker-Falkner, DSC, RN, of *Furious*, senior officer of the bombers, under whom Lt Cdr F R A Turnbull DSC of *Victorious* commanded the Corsairs, and Lt Cdr J W Sleigh DSC of *Pursuer* and Lt Cdr (A) M F Fell RN of *Searcher* commanded the fighter aircraft of Strikes 1 and 2 respectively. Later that day, the airmen in *Furious* were surprised to receive a visit from Baker-Falkner, who landed on from *Victorious*. He informed them that the C in C had decided, following Nelson's maxim never to trifle with a fair wind, to advance TUNGSTEN by 24 hours to 3 April. The Admiralty had learned from decrypts that *Tirpitz* was due to carry out full speed trials on 1 April, but shortly before noon on that day further intercepts disclosed that this had been postponed for 48 hours. Admiral Sir Bruce Fraser and his second-in-command, Vice Admiral Sir Henry Moore (who was to be in charge of the air strikes) were immediately informed by Ultra signal. Forces 1 and 2 met in the afternoon of 2 April and the CinC in *Duke of York* returned to Scapa, as previously arranged. Vice Admiral Moore re-organized the TUNGSTEN forces into groups as follows:

Force 7 – HMS *Anson*, with the two carriers *Victorious* and *Furious* and a supporting force of cruisers and destroyers. Aircraft squadrons embarked in *Victorious* were 827/829 Barracuda II and 1834/1836 Corsair II, while *Furious* carried 830/831 Barracuda II and 801/880 Seafire III for Fleet Protection Duties.

Force 8 – HMS *Royalist,* with the escort carriers HMS *Searcher* (882/898 Wildcat V), *Pursuer* (881/896 Wildcat V), *Emperor* (800/804 Hellcat I), and *Fencer* (842 Swordfish and Wildcat V for Fleet Protection Duties). This force was similarly supported by a cruiser and six destroyers.

The combined forces steered directly for the flying-off position at 71.30'N; 19.00' E, which it was intended to reach at 04.15 the following morning. Sunrise on 3 April was at 04.35. Vice Admiral Moore later reported: "By 03.00 on 3 April it appeared that everything was in our favour. So far as we knew we had not been sighted, and flying conditions were perfect for putting the operation into effect. There was a light off-shore wind, and visibility was so good that while landing on the strikes later, we sighted the Norwegian coast at a distance of about 50 miles." The two Strikes were carried out as follows

Strike 1. At 02.30, the TBR crews (pilot, observer, and telegraphist air-gunner) in *Victorious* and *Furious* were called for last-minute briefing. By 04.05, all 21 aircraft were ready, and their engines were started up, with not a single failure, a fine

tribute to the work of the maintainers and aircraft-handling parties. Zero hour for flying off was 04.15 and the first of the 11 escorting top cover Corsairs took off from *Victorious,* followed eight minutes later by 12 Barracudas of 827 Squadron. Concurrently, nine Barracudas of 830 Squadron took off from *Furious*. The remainder of the fighter escort (30 Wildcats and Hellcats) departed from the escort carriers and formed-up with No. 8 Naval TBR Wing (827 and 830 Sqns) and all departed for the target. Weather conditions were ideal, a good steady breeze of 12 to 14 knots from the south, maximum visibility with very little cloud in the direction of the coast, and no swell.

For twenty minutes the Force flew low over the water, climbing to 10,000 ft when some 25 miles from the Norwegian coast. Two minutes later Loppa Island was identified and the coast was crossed at 05.08. Passing close west of the head of Langfjord, they proceeded south-eastward, down the snow-covered valley towards the head of Kaafjord, finally swooping on their unsuspecting quarry from the south-west. At about 05.28, the Force was deployed at around 8,000 ft. At the same time high-angle batteries at the head of the fjord and elsewhere opened a heavy but inaccurate fire, and *Tirpitz* was sighted in the expected position. The Force Commander sent all Hellcats and Wildcats down to strafe guns and target, which they did most effectively, whilst the Corsairs patrolled over the whole area at about 10,000 ft. The enemy started a smoke screen all around the fjord as soon as the aircraft were sighted, but it was a case of too little and too late and, owing to calm weather conditions, completely ineffective.

A minute later, the first Barracuda peeled off and dived to the attack, followed at rapid intervals by the rest of the wing, releasing their various contributions of high explosives (maximum load, 1,600-lb. AP Bomb) from heights of between 3,500 and 2,000 ft. Hits were scored immediately, causing heavy explosions and flames. 60 seconds after the first bomb had been dropped, the attack was over and it was evident that *Tirpitz* was heavily damaged.

Strike 2. At 05.25 (just as Strike 1 was about to attack), Strike 2 had begun to take off - 11 Barracudas of 829 Squadron (one of these Barracudas crashed into the sea on take-off with the loss of three aircrew) from *Victorious,* concurrently with 9 Barracudas of 831 Squadron from *Furious*. The 19 remaining Barracudas of 52 Naval TBR Wing (829 and 831 Sqns) with their escort of 40 fighters, formed up as the strike force under the command of Lt Cdr (A) V Rance RN, of *Victorious.* Lt Cdr (A) M F Fell RN of *Searcher* was senior officer of the close escort. They departed at 05.37 and after following a course very similar to that of Strike 1, arrived in the target area at about 06.30. Strike 1 passed them to port on their

way back to the Fleet, at Loppa. They saw that *Tirpitz* appeared to be on an even keel, and of normal trim and draught, despite the efforts of the first strike, but she had swung across the fjord with her stern nearly aground, and was thought to be drifting.

The final run in took place at 06.36. There was considerable close-range flak, mostly in the form of a box barrage round the target. One Barracuda was shot down, but is believed to have carried out its attack. By the time the last aircraft dived, the *Tirpitz* had ceased firing and was burning fiercely amidships. As in the first strike, the attack had lasted just one minute. By 07.58 all of the remaining aircraft had landed safely on the carriers, including one that had a hang-up with one of its three 500 lb SAP bombs, which it later jettisoned over the sea.

The Admiralty's Battle Summary, based on pilots' reports, confirmed 20 hits, although according to the enemy, the bombers scored 15 direct hits and two near-misses. The ship's upper deck had been heavily damaged, leaving it on fire. The fighters did not confine their attention to *Tirpitz* and as they left the area they attacked small patrol craft and auxiliaries. Those of Strike 1 set on fire a steamer and a heavy repair ship. The Strike 2 fighters damaged a pair of vessels of the local patrol force.

Vice Admiral Moore had intended to repeat the attack the next morning, but after receiving reports of the serious damage already inflicted on *Tirpitz*, and also of the fatigue of the air crews and their natural reactions after completing a dangerous operation successfully, he decided to cancel further operations, and directed all forces to return to base. The return of the Fleet to Scapa Flow was a heart-warming occasion for all of those involved in TUNGSTEN, as the battleship *Anson,* followed by the fleet carriers *Furious* and *Victorious*, three escort carriers and their attendant cruisers and destroyers, entered harbour and passed slowly down the lines of cheering ships' companies for "Welcome home and Splice the Mainbrace" celebrations.

King George VI sent the following message to Admiral Sir Bruce Fraser, GCB, KBE, Commander in Chief Home Fleet: "Hearty Congratulations on your gallant and successful operation yesterday". The C-in-C Home Fleet replied: "With humble duty I thank you for your gracious message which was much appreciated by us all". The Prime Minister, Winston Churchill, also signalled Admiral Fraser as follows: "Pray congratulate the pilots and aircrews concerned on this most brilliant feat of arms so serviceable to the Royal Navy and to the whole world cause".

In paying his tributes to the participants of all ranks in TUNGSTEN, Vice Admiral Sir Henry Moore (VA2) said: "... above all, I wish to express my admiration for the brilliant attack carried out by the aircrews themselves, most of whom were having their first experience of

enemy action." Other congratulatory messages came from the First Sea Lord (Admiral A B Cunningham) and from the AOCinC of Coastal Command. It was quite apparent that the War Cabinet and the Admiralty were more than satisfied with the success of TUNGSTEN.

On 11 May 1944, the King paid a visit to Orkney and inspected and congratulated the fighter squadron pilots assembled in *Searcher* at anchor in Scapa Flow. From *Victorious* at sea, the King also witnessed flying exercises by Barracudas of 52 Naval TBR Wing and Corsairs. On the following day the King boarded *Furious* at anchor and inspected and congratulated the aircrews of 8 Naval TBR Wing , and the pilots of the Seafire squadrons (801 and 880) involved in fleet protection duties at the flying-off position.

Operation TUNGSTEN took place just two months before the Allies launched Operation OVERLORD on D-Day 6 June 1944. It is worth summarising the achievements of TUNGSTEN before they were eclipsed by that much larger allied undertaking. The official Admiralty Report on the successful operation was published in The Times on 6 April 1944, under the headline "TIRPITZ LEFT ON FIRE". The report reminded readers that the TUNGSTEN Fleet's Force 1 successfully conducted the north Russian convoy JW58 of 49 ships from the Faeroes to a position at 72 30'N; 19 00'E, from whence the convoy was escorted to Kola Inlet in the USSR. The naval historian Captain SW Roskill in "The War at Sea, Vol. III" described the air operation as follows: "The attacks had been beautifully co-ordinated and fearlessly executed - a splendid tribute to the spirit of the aircrews and to the thoroughness of their training". Another writer, Ian Cameron, in his book "Wings of the Morning", made the following comments: "In exactly sixty seconds the Fleet Air Arm struck the *Tirpitz* a blow of incredible swiftness and precision. In what was perhaps the most perfectly timed and brilliantly executed bombing attack of the war the mighty battleship disappeared in a welter of hits and near misses. In those sixty seconds..... its superstructure was reduced to a knackers' yard of smouldering scrap and it drifted, out of control, to the south-east shore of the fjord and ran aground. It is not surprising that the operation had little hope of sinking the mighty, superbly-armoured Tirpitz. However, there is no doubt that the efforts of the two strikes left the vessel in serious plight, as admitted unequivocally by the Germans. *Tirpitz* was severely disabled, and proved to be no further threat to the north Russian convoys. The historian Ray Sturtivant commented that, but for the earlier efforts of the Fleet Air Arm, it is debatable whether the enemy ship would have been vulnerable to the RAF on 12 November 1944 in Tromsoysund when it was sunk as a static target.

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OPERATION TUNGSTE

HMS Victorious during TUNGSTEN carrying 827 and 829 Barracuda II Squadrons, and 1834 and 1836 Corsair II Squadrons

Barracuda taking off over the improvised ramp in HMS Furious

TEN - MAY 1944

Tirpitz under attack in Strike 1. Note whip-lash detonation ripples at stern

FAA MkII Corsairs in HMS Victorious

Tirpitz immediately after the first strike

Hellcats of 1840 Sqn in June 1944

Armourers preparing 1,600 lb AP bombs

HMS Victorious - Trollies with armed bombs are wheeled to waiting Barracudas

BARRACUDA RESTORATION

By Graham Mottram and Dave Morris

MK1 Barracuda P9659. From a colour postcard entitled "After the Battle".

I was once asked by a Barracuda veteran why the museum did not have one on display. I answered that we had quite a lot of wreckage but no money to fund its restoration. Would he like to contribute? He told me to save my money, he remembered most of them as heaps of wreckage. The main source of the wreckage in the Museum was Barracuda DP872, which had crashed into Enagh Lough during takeoff from RNAS Maydown, Londonderry, on 29 August 1944. Sadly, the pilot had elected to take off in fine pitch and the aircraft stalled into the Lough with the loss of three lives. Some efforts were made at the time to recover the wreck but with limited equipment and in quicksand conditions, sadly a recovery of the crew could not be achieved. In 1970, the then curator, Lt Cdr Les "Harpy" Cox,was tipped off about it and he managed to organise a team of Royal Engineers who, in 1971, recovered most of the aircraft and also the remains of the crew.

The wreckage was stored for many years in what was Historic Flight's store. The recovery photographs show some wing components being lifted from the mud but they had gone by 1983. The fuselage was in a storage hangar at Wroughton, and there were other Barracuda parts, such as several undercarriage legs from unspecified sources dotted around museum premises. In the mid 80s, we were told an old engine had turned up in a crate in the south side tip, which turned out to be the Merlin from DP872. Fortunately, the engine was saved but the wings appear to be long gone.

We decided that the engine should be the start of a restoration project. Vivian Bellamy, of Hampshire Aeroplane Company had finally finished the Albacore and offered to do some work on the Barra. The engine and bearers went off to Viv's workshops at Longparish where Mike Lamb tidied up some of the external damage to the engine and created a new set of engine cowlings. This work (as is the current work) was

hugely assisted by the loan from the RAF Museum of thousands of Barracuda drawings on microfilm. I remember coughing into the Museum's chequebook when I sourced a pair of original cam covers and was told the price. This project did not last more than about two years, as FAAM could not afford to fund the whole operation and that work came to an end. In the meantime we had continued to find other bits of Barracuda and the pile of wreckage was growing ever larger. Cobham Hall had been built in the meantime and we were able for the first time to have everything in one place. However, other projects such as the Corsair and Martlet took priority. It was probably 2010 when Will Gibbs from Dave Morris' team was bitten by the Barracuda bug and asked if he could take a lead and try to make some progress. One volunteer is worth a whole bunch of "maybes" and Will used the open spaces in Cobham Hall to lay out every Barracuda bit that we knew we had. After months of hard work he had listed what we held, how many of them, and, most importantly, what we did not have. Dave Morris had met Bill Smith of the Bluebird Project (BBP) who had recovered and was rebuilding Donald Campbell's Bluebird jet-powered speedboat. It was clear that Bill was doing some interesting things to maximise the amount of original material being reused in Bluebird and he was also looking for another project to occupy his team when work was held up. The FAAM Trustees approved our proposal to transfer some Barracuda work to BBP, of which the tail unit should be the first element. We had lots of tail bits, and there were also lots of mangled bits on which Bill could use some of his techniques to straighten and re-engineer. Will Gibbs would be the project overseer and Dave the project manager and budget controller. Parts of the tail unit gradually started to take shape at Newcastle, but regrettably, we were never able to agree a firm contract for this work and had to terminate the agreement in 2013. But back up plans were already in embryo and once all the material had been retrieved from Newcastle, Dave and Will reorganised the Restoration Hangar and set to work.

In many ways this was a turning point for the Barracuda project, with a renewed focus. All of the parts were at FAAM, as were the skills and capability. The newly-formed National Museum of the Royal Navy (NMRN) backed the project completely, recognising it as a key high profile project, This illustrated that the NMRN was not just interested in ships and watercraft, but also the aircraft that operated with them.

William set about the task with vigour and enthusiasm. He decided quite quickly that, for a really

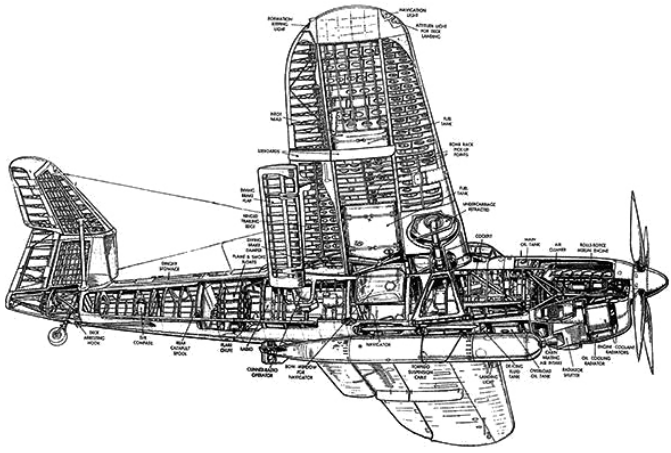
professional result, the existing work would have to be completely taken apart and re-jigged. This did not negate all of the work done before, but his research showed where and how all Barracudas began life, and frame 11 was that start point. Unless that was absolutely square and true, then we were going to get a "Barranana", not a Barracuda. As the build progressed, his attention to detail and understanding of how the aircraft needs to come together can only be described as being at the top of his game. The aircraft is being rebuilt to high standards, using as much of the original material as possible before any new metal is cut. Access to better workshop equipment has made a significant difference, along with industry support that we previously had not used. Progress in the hangar has encouraged and aided this industry link, with several companies beginning to show interest in the uniqueness of the project and the quality of the work. At the moment the cockpit section looks like a never ending process. It goes together, comes apart, and goes together again (and again), as William fathoms out what was bent in the factory and what was bent in the crash. If you consider the task of matching incomplete drawing sets, photographs and more bent parts, you can begin to understand why progress appears slow. However, this section is much closer to final assembly than people think.

The cockpit begins to take shape, built forward from Frame 11.

Thanks to William's skill and determination, an impressive proportion of original Barracuda is coming back together. One undercarriage leg unit is now rebuilt; using all original parts. Work on the second leg unit is also in hand. When the firewall is finally in place (hopefully by July) work on the engine bearers and forward engine area can begin. Also, as the cockpit floor

sections go in, we can begin to jig rearwards from frame 11 towards frame 6 and the observer's cockpit area. At this stage it will definitely begin to look more like an aeroplane.

We are seriously considering investigating the wreckage of a Barracuda on a mountain side near Alta in Northern Norway. This was one of the two aircraft lost during the raid on Tirpitz in April 1944. This will require a lot of planning, funding and international hoop-jumping to gain permission to do what many people think is a straight forward case of driving to Norway in a van and collecting it (if only it was that simple). However, Barracudas seem to be like buses, you wait for years for one to come along, and then two turn up at once. Yes, a second wreck has been located nearer home in the Solent, as part of an industrial installation. (The location and identity of this installation are currently not approved for release.) We have been invited to consult and advise on the recovery of the wreckage, and hope that this will yield some vital information to aid the project, even if the actual hardware is beyond re-use because of corrosion. The recovery of this wreck collides with the only opportunity we had this year to access the Alta wreck, so that one will have to wait a year unfortunately.



Barracuda cutaway illustration, from a contemporary poster.

Any wreckage recovered from the Solent will need some immediate attention to stabilize it, kill corrosion and conserve it for use. This means that we are reviewing our blasting and corrosion treatment equipment, which is also diverting some time from the coal face of the project. However, we have target points to aim for and are determined that the Barracuda progresses and develops regularly to reassure people that their support and enthusiasm is rewarded.

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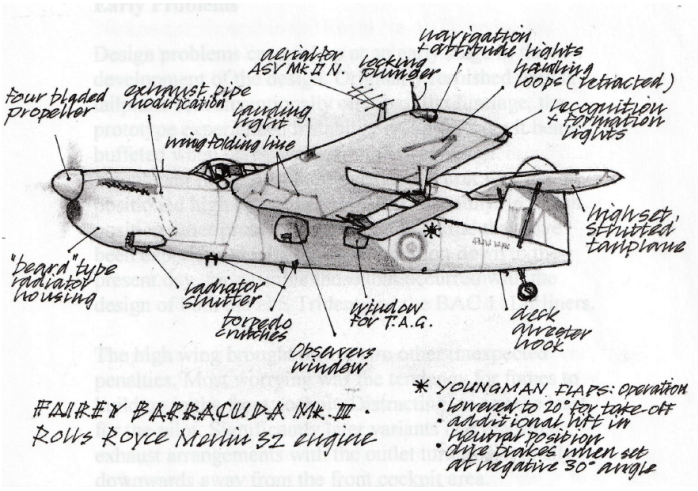
BARRACUDA CONCEPT AND OPS

By Jim Humberstone (who also drew the pictures)



The Royal Navy's first pioneering air-launched torpedo drop took place in the Solent, off Calshot in July 1914. The aircraft was flown by a young Naval officer called Longmore, later to become an Air Chief Marshal. Naval strike aircraft designs, from Sopwith Cuckoo to Westland Wyvern, always reflected the important requirement to launch torpedoes. The specification of Torpedo Bomber Reconnaissance aircraft (TBR) also included the requirement to carry additional crew members. Finally, reflecting the still prevalent view that dive bombing was the most accurate way to deliver bombs, substantial dive brakes were also to be fitted. Such was the background to the Barracuda design, drawing on operational experience with two preceding products of Fairey's Hayes factory, the immortal TBR Swordfish and its rather disappointing successor the Albacore. The resulting design met mixed reactions from those required to fly the type and those having to handle and maintain it.

In changing from the biplane arrangement of the Swordfish to a more modern monoplane design, Fairey configured their new TBR with a high wing. This gave the observer an uninterrupted view through large bay windows low down on each side of the fuselage. Navigation was a critical part of an observer's duties and to this end compasses could be provided at each window. Visibility was also taken into account with the location of the Telegraphist Air Gunner (TAG) behind the observer, also furnished with side windows, though of a smaller size.

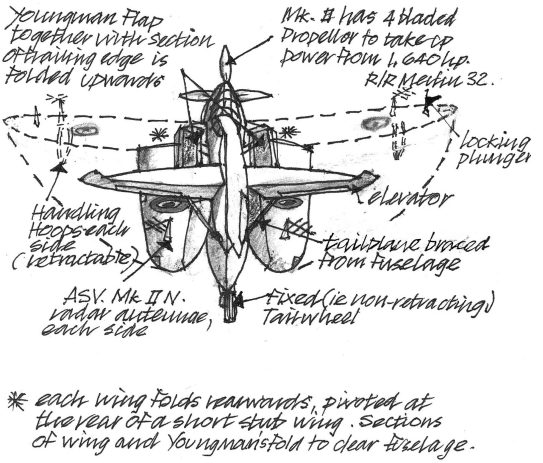
Problems occurred at an early stage in the development of the design. Originally furnished with an

empennage set conventionally on top of the fuselage, the prototype experienced instability caused by the tailplane being buffeted by turbulence from the large Youngman flaps. As a consequence it was re-positioned higher up on the fin.

Insufficient engine power dogged the earlier Barracudas. Rolls Royce had been developing an engine specifically for naval application (the 24-cylinder air-cooled Exe) but the relatively small naval requirement led to the cancellation of this programme to enable Rolls to concentrate on Merlin and Griffon production. In the Barracuda's case, the significantly underpowered 1030 hp Merlin Mark 30s of the Mark 1 was later replaced in the Mark II with the Rolls Royce Merlin 32 giving 1,640 hp, representing a 20% increase over the earlier model. Even this more powerful engine gave the big aircraft only mediocre performance in "hot and high" conditions

Nicknames abound in the Royal Navy. The Swordfish earned its Stringbag tag as a mark of affection rather than disdain. The Barracuda, on the other hand, was greeted with much less respect and reasons were not hard to seek, as looks are important. Once in the air the Barracuda presented as a fairly sleek and purposeful machine, likened by some to a model aeroplane. When on the ground however, it was a different story. With its wings folded, it presented, insect like, a confusion of undercarriage struts, assorted pieces of wing and various other appendages, whose purpose would pose a mystery to the lay onlooker.

However, its odd appearance arose from functional requirements. The choice of a shoulder-mounted wing led to a lengthy stalk of an undercarriage, with the main-wheels located far enough out to ensure a wide track for flight deck operations. In addition, the undercarriage design had to give sufficient safe clearance for torpedoes or bombs. The location of the main oleo legs, mounted inboard of the wing folding break, led to the design of a short cantilevered wing stub to which the landing wheels were attached, a well section in the fuselage wall into which this assembly



"Wing folding was effected at the wing roots"

retracted and finally wheel wells in the outer (foldable) sections of the wings, complete with requisite covers.

Wing folding was effected at wing roots, each plane pivoting rearwards then swivelling to lie snug against the fuselage. Retractable hoops under the wings brought them within reach of the handling party when ranging the aircraft. Wing folding required not only the bulky flaps to be folded up out of the way, when the wings were turned and positioned back along the fuselage, it also required a substantial length of the trailing edge to be pivoted upwards in similar fashion.

Early development flying was marred by several serious accidents, caused in part by the instability created by the Youngman Flaps during steep test dives. At least three accidents occurred during these tests and in two of these the propeller became detached from the airframe. Dive angle in the dive-bombing role was limited to 60 degrees. The view of one highly experienced Fleet Air Arm pilot, witnessing the problems experienced during the build up to the Tirpitz attacks, seemed to represent service opinion: “a dreadful aircraft” was his verdict.

Despite being faced with an aircraft that was underpowered and dangerously unstable in its primary role, Barracuda aircrew achieved some quite remarkable successes. Principal among these were the April 1944 attacks on the Kriegsmarine’s powerful capital ship *Admiral Tirpitz*. Any attack would be faced with many difficulties. The battleship was heavily protected with torpedo nets and other underwater protection, surface and anti aircraft batteries and an efficient smoke generating system. The steep fiord sides and surrounding mountain ranges inhibited approaches from any direction likely to be chosen by attacking aircraft and Luftwaffe fighter cover was on hand nearby.

Tirpitz had been attacked in its fastness by the Royal Navy before. In March 1944 it had just recovered from damage inflicted in the previous September when a group of X-Craft, British midget submarines, had penetrated its defences and managed to damage the hull with limpet mines. Signals intelligence reports of its readiness to sail that March triggered an aggressive response from the Admiralty, committed as it was to the resumed transport of war materiel by Arctic convoy to its ally Russia.

The end of March 1944 saw the Home Fleet under Sir Bruce Fraser set out from its base at Scapa Flow flying his flag in HMS *Duke of York* accompanied by sister 14 inch gunned battleship HMS *Anson*, together with four cruisers and screening destroyers. A separate carrier force provided a powerful striking arm. They were tasked with the joint objectives of providing distant cover for Russian convoys with an opportunity task of attacking the German capital ship in its lair. Six aircraft carriers embarked the FAA component, HMS *Victorious* in one squadron and HMS *Furious* and four Escort Carriers, HMS *Emperor,*

Pursuer, Searcher and *Fencer*, in the other.

Operation "Tungsten", as it was called, proved to be highly successful. Setting out at before dawn on 3 April 1944, 40 Barracudas from two TBR Strike Wings, some of which were armed with 1600 lb Armour Piercing (AP) bombs, attacked the ship. They achieved complete surprise, striking just as *Tirpitz* was about to weigh anchor, and before smoke screens could be organized. Though hampered in their approach by the steep walls of the fiord, the TBRs scored around a dozen direct hits on the warship.

The attack represented a brilliantly planned, rehearsed and executed operation which achieved well deserved results. On this occasion, despite misgivings about the Barra's capability and performance, only three aircraft were lost, one of which succumbed on takeoff and two others shot down during the attack. Air superiority was provided by FAA Wildcats and Hellcats in suppressing the flak batteries, but this was still a very creditable performance. The attack put the battleship out of action for three months, representing a similar result to one of the Fleet Air Arm's successes at Taranto, some three years before. All but about a dozen of the aircrew manning the 120 plus aircraft on the strike were reservists, most seeing their first action of this sort. Credit should also be given to the contribution of the converted WWI Battle-Cruiser, HMS *Furious.* She was one of Britain's first aircraft carriers, which had already valiantly performed duties from the North Sea to the Mediterranean, pushing its aging machinery to the limit and still playing an active part in an important and potentially dangerous fleet action. A measure of the efforts put in to ensure its full contribution was the construction of a makeshift ski ramp, installed at the fore end of the flight deck, which overcame its limited length and enabled the bomb laden Barracudas

Armourer Bob Cotcher chalks his message on a 1600 pound bomb loaded to a Barrracuda of HMS Furious. Photo IWM

to lift clear of the carrier. The shape of things to come as it turned out.

In line with the wartime practice of spreading the load, manufacture of some Fairey Barracudas was put out to other plane-makers. After 30 Mark Is had been completed by the parent company, production was then undertaken at Blackburn's factory at Brough and the Boulton Paul works at Wolverhampton. Just over 1700 Mark Is and Mark IIs left these companies' factories during the mid 1940s. Westland completed a score of Barracudas before committing to the higher priority of Seafire production.

The aircraft was successively updated and improved, with the Mark III being fitted with ASV radar in a ventral radome. An even more powerful version of the plane was the Mk V version, powered by a 2,030 hp Rolls Royce Griffon 37 engine. Its span was 4 feet wider and the fin enlarged to counter the extra torque of its power-plant. Extra fuel capacity was provided. This boosted the machine's range to meet the expected needs of the Pacific conflict. War's end saw the cancellation of the order for these with only 30 delivered. The last Barracudas were retired from FAA service in 1953. They had served in the Atlantic, Indian and Pacific Oceans as well as the Arctic and Mediterranean.

A Barracuda lands on HMS Furious after the attack. *Photo IWM*

Barracudas were complemented and then succeeded by Lend Lease Grumman Avengers during the last stages of WWII. Nothing however could take away its brief moment of triumph, winning its spurs in action, high up above the Arctic Circle in 1944. It must have gladdened the hearts of those few RN and Fleet Air Arm personnel, who had witnessed the tragedy of the failed Norway campaign in 1940, to see in those same waters, as dawn came up on that April day, 120 Royal Navy carrier planes winging their way to carry out an attack on the enemy in such strength.

Though an ugly duckling to many, the Fairey Barracuda undoubtedly served its purpose with distinction, and none more so than during that brief period of tumult in a Norwegian fjord in early 1944.

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IN THE SLIPSTREAM OF DAEDALUS

The RNAS at Gallipoli, by Graham Mottram

This article is Part 1 of a somewhat abridged version of a long historical narrative by our Chairman. Part 2 will follow in a future Jabberwock.

There are lots of partial narratives about the use of aircraft in the Gallipoli campaign in 1915 but not one single and reliable source. Controlled aviation was only 11 years old at the time and organised military aviation in Britain was barely four years old. Aircraft manufacture had been confined to small batches before the war and its rapid expansion stretched design and manufacturing resources to the limit. There were few men available to deploy with real technical aviation knowledge, while conditions in the theatre were challenging - the heat warped the airframes and reduced the power of the engines. There was very little air warfare during the invasion of the peninsula; a few Turkish aircraft were employed during the key period but what few combats took place were nearly all at the end of the occupation involving the increasing number of German aircraft and pilots. A considerable quantity of naval and aviation assets were committed to the campaign, although what is remarkable about the air contributions to Gallipoli is that there were any at all. When Admiral Carden, commanding the Aegean Blocking squadron, was asked to submit a plan to force the Straits in January 1915, he emphasised the need for aerial reconnaissance and naval gunfire spotting. He asked for seaplanes, since the Royal Flying Corps, which had better skills at artillery spotting than the RNAS, had been prevented from taking part by Lord Kitchener.

Admiral Carden's plan included HMS *Ark Royal,* the RN's first purpose-built aviation vessel, launched at Blyth in September 1914. Her notional aircraft capacity was 10 but that depended upon the size of the aircraft. She was commanded by Commander Robert Clark-Hall, whose task was to provide reconnaissance and gunfire spotting, necessary to redress the advantages that land-based high trajectory guns had over the flat trajectory of ship mounted guns. He embarked three Sopwith seaplanes, two Wight pusher seaplanes and one Short seaplane. With one exception, he said, they were "all sadly inefficient"; only the Short seaplane number 136 was any good. It was more robust than the others and had a reasonably reliable 200 hp Salmson engine. He also took four Sopwith Tabloid land planes in the hope that they could fly from a field established after the successful invasion of the peninsula.

Clark-Hall complained that they were useless for reconnaissance because the pilot could not fly and record his observations at the same time. Engine reliability was poor; the Short seaplane was the best but even then many of its flights were curtailed by engine trouble.

Wireless telegraphy between aircraft and ships was critical to the role of gunfire spotting. The wireless set was a spark transmitter and there was no receiver on the aircraft. These were some of the very first sets tried anywhere and there was no specialised technician to maintain them. Also the two sets had to be moved from one aircraft to another between flights. When *Ark Royal* arrived in Tenedos on 17 February 1915, she was ordered to carry out an area reconnaissance of the Forts and any additional field artillery. After several attempts, one of the Wights, crewed by Flt Lts Bromet and Williamson, got off, finding new fortifications and returning with seven bullet holes in the fabric. They had also dropped one 20lb bomb on the Asiatic side. Their reports of Turkish activity convinced Carden that he should act as soon as possible and the first fleet bombardment began on 19 February. Two aircraft went up to spot for *Inflexible* but one aircraft's aerial jammed and the other's set suffered a short circuit - not a promising start.

During the next few months, *Ark* received more aircraft, including two new Sopwith Schneiders, two Sopwith 860 seaplanes and Short 166 seaplanes, of which she had six by the end of August. In March the fleet moved into the Straits to attack the inner defences and Sopwith seaplane 808 was sent up to spot for HMS *Queen Elizabeth*. At 3000 feet its propeller splintered and the aircraft crashed into the water. Both airmen were rescued by HMS *Usk* but Flt Lt HA Williamson spent some weeks in hospital and was off flying for some months. Later the same day Lt Douglas was hit by a rifle bullet in the leg and was forced to land. Much of the flying in March was mine spotting patrols in preparation for the major fleet action. The aircraft managed to spot several mines on 16 March but missed the new field that had been laid parallel to the Asiatic shore on 8 March. It was this field that ended the naval attempt to force the Narrows on 18 March. When the bombardment began, *Ark Royal* should have sent an aircraft every hour for continuous observation of spotting but the first seaplane only managed to get aloft an hour after the main advance had begun.

Meanwhile, Cdr Charles Samson was ordered to take his unit from Dunkirk and head for the Dardanelles. Samson was the first naval officer to gain his pilot's licence and he had been an inspirational and courageous pioneer ever since. He already held the DSO for his exploits around Antwerp and Dunkirk. Samson took the advance party, including a few aeroplanes, by ship and road, whilst

his executive officer Richard Bell Davies took the rest by sea from Plymouth. At Marseilles Samson's ship loaded two M Farman and eight Henry Farman F20s, brand-new aircraft bought from the French purely for Samson. He complained about these before leaving England, as the aircraft were suitable for training in Europe but hopeless in the conditions around Gallipoli. In March, Samson's unit arrived in Imbros, where he met Admiral de Robeck, who said he was delighted to have aeroplanes because the seaplanes had shown very poor performance. He told Samson that Clark-Hall was preparing an airfield on the island of Tenedos about 30 miles south. Samson guaranteed he would have an aircraft in the air within 12 hours of landing his unit. That was slightly cheeky because he had his favourite aeroplane on one of the lorries and it only needed its wings attaching before it could fly. He made his way to Tenedos, landed his aeroplanes and erected a large canvas hangar. It was a struggle to get the aircraft ashore and on to the aerodrome because some of the crates were 47 feet long. The airfield had been a vineyard 3.5 miles from Tenedos town, built by a large gang of Greek labourers. It took two days to get the crates to the airfield with 100 sailors and 60 Greek troops hauling them up the road from the beach. De Robeck now ordered that the landplanes would make most of the flights over the peninsula whilst the floatplanes would deal with areas beyond their range.

On 28 March Samson took his favourite BE2, Number 50, up the Dardanelles as far as Kephez to look at the operational area. He noted that the whole area was enemy territory and that any emergency landing would have to use either Mavro or Rabbit Islands. On 2 April the war began in earnest as an enemy aircraft bombed HMS *Albion* at Rabbit Island. On 3 April Samson made the first attempt at naval gunfire spotting controlled by W/T, flying with Osmond in one of the Maurice Farmans. The wireless sets were described as "rather home-made affairs". They worked with HMS *London* to engage Turkish batteries on the Asiatic side near Achilles' tomb. They did well enough for the captain of *London* to signal a thank you afterwards. Samson was relieved when his second party arrived, bringing with them five aircraft: two BE2C which were again not very good aircraft, one BE2 which are been built out of bits of three machines but actually "a real good machine", and two Sopwith Tabloid single seaters, which were "not much use and which had a habit of shaking out their engines". Two more aircraft were Reginald Marix's big Breguet with 200 hp engine and an armoured nacelle. Marix was very enthusiastic about this aeroplane but nobody liked it because its engine was a doubtful performer. The second aeroplane was a Maurice Farman, 1241. Samson's nominal strength was now 22 aeroplanes but only five of these were of any practical

use. By then, he had 18 officers and 102 men, some of whom lived in the vineyard owner's house and some in tents. Somehow a large marquee was acquired for use as a mess tent. Six canvas hangars, a workshop lorry and a searchlight lorry had been brought from France. All maintenance and repairs had to be done with these scant resources. He was short of observers, so two army officers and three midshipmen were selected, reputedly because they were light in weight and had some navigational experience. Bell Davies was the executive officer as well as flying on many operations.

Flight Commanders Reginald Marix (l) and Thomson at Tenedos in July 1915. *Photo Knatchbull*

The mechanics did a brilliant job of work keeping the aircraft as safe to fly as humanly possible. The main flying tasks were naval gunfire spotting; reconnaissance and photography to be used for mapping; and tactical bombing. Most flights carried bombs and dropped them on targets of opportunity after spotting was completed. Much of April saw regular flights to spot for battleships attacking the shore batteries. In preparation for the landings they began flying and photographing all the trenches and light gun emplacements around Anzac and Helles landing beaches. The Army HQ only had a few bad maps of the area and eventually an updated map was produced from the photographs taken by Samson's men. Flt Lt C H Butler in a Henri Farman did much of the photography single-handedly, using a folding camera. *Ark Royal* now returned from supporting diversionary operations off Smyrna and on 8 April anchored in Mudros to receive six new aircraft. From mid April, *Ark*'s aircraft provided spotting flights from the Gulf of Xeros, trying several times to spot for shot against an ammunition dump without success. Two seaplanes also bombed *Turgeid Reis* (formerly SMS *Weissenburg* of the German Navy) without scoring any real hits, but on 15 April they found a major ammunition dump and directed accurate fire from HMS *Lord Nelson* on to it. On 8 April there was reinforcement in the shape of HMS *Manica*, the first ever kite balloon ship in the Royal Navy. This was converted from a merchant ship whose pre-war task was carrying manure. *Manica*'s balloon observers were soon able to direct fire from Bacchante on to a Turkish troop camp. The balloon had a direct telephone link into the ship, which could then signal corrections more reliably than an aeroplane wireless. On 12 April Samson took Lt Cdr Brodie of Submarine E15 at low altitude up to Kephez point, in

preparation to take his submarine through the narrows. On 17 April Brodie tried to take E15 through the narrows while Samson's unit provided diversions by bombing Maidos and Khalid Bahr, but E15 ran aground at Kephez, where Brodie was killed and his crew captured.

In preparation for the landings Samson mounted the first major raid of five aircraft against Maidos, but he had concluded that the landings would be impossible from what he had seen from the air. On the day of the landings the aircraft remained over the beaches to spot for warships targeting Turkish positions firing on the boats. They also flew a long reconnaissance to Bulair to spot any reserve movements. Most pilots flew three times in that day but found that most of the ships ignored their signalling of fall of shot. Samson himself covered Lancashire Landing and watched the carnage. Despite his signals of the positions of troops and guns the ships continued to fire too far inland. Samson dropped his bombs but missed his targets. On his way home he noticed the troopship *River Clyde*, the red water and beaches littered with corpses. On his third flight in that day a bullet struck his propeller but it managed to vibrate its way home. He had only six effective aeroplanes and neither he nor the Navy had much experience of gunfire control. Both *Ark Royal* and *Manica* supported the Anzac landings on 25 April and it quickly became obvious that the balloon was better than an aircraft in spotting enemy positions. During the day *Turgeid Reis* fired her 11inch guns over the peninsula at vessels landing troops but was driven off with fire directed by *Manica*'s balloon.

On April 31 Samson flew to Helles to find a landing ground. The troops appeared to have settled and they accepted the frequent shelling they were suffering. Samson found a suitable spot about half a mile from Lancashire Landing and subsequently tried to keep one or two aircraft working from there during daytime, although the airfield was in full view and in field gun range. Samson recorded, "Every time you landed you got shot up. Fortunately there was some shelter behind the hill to which you could taxi and then hide the aeroplane, but you got it pretty hot whenever you emerged. I lost five aeroplanes hit by shells. At last it got too expensive and we gave up the use of it, except for special purposes". Eventually they rigged up a dummy Voisin aeroplane and duped the Turks into firing 127 wasted shells at it. At one point Samson wrote that he would soon be shifting to the mainland once the advance had put the landing strip out of artillery range, but that never happened. Marix was planning to use his Breguet to attack Constantinople but needed a proper test. They decided that Ak Bashi Liman was just the place. With Samson as observer they dropped 15 bombs on the dock where the Turks were busily unloading stores. They killed 13 men and wounded another

44 in addition to stopping work for two days as the labourers fled to the hills. Marix made it back to Tenedos but the engine seemed to be misfiring most of the time.

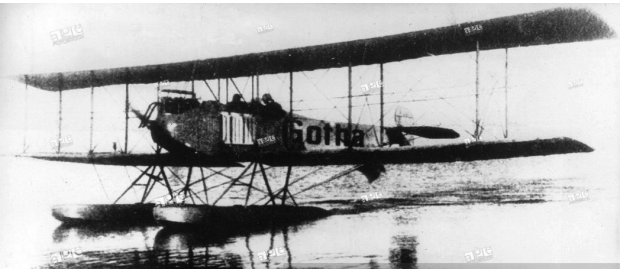
Later, a French unit, MF98T under Captaine Cesari, turned up with Maurice Farmans. Their main skill was in photo reconnaissance and they are credited with providing the first overlapping mosaic of photographs of the fighting zones. A healthy and cooperative rivalry developed, so much so that Samson claimed that he swapped two of his Nieuport Scouts for one of their Maurice Farmans, because he wanted a good duck shooting machine. The primitive bomb racks caused problems with bombs hanging up when the fuses had been spun up by the slipstream. Peirse had one hang up and his observer climbed out on the undercarriage skids and kicked it off. Samson had a problem with a Nieuport from Imbros when a rusty bolt failed and the bomb fell off and exploded as he began his takeoff. The aircraft was seriously damaged and petrol was streaming into the cockpit but Samson managed to land back safely when the tail plane and rudder promptly fell off.

On May 2 Reginald Marix had the first successful air fight. He chased a seaplane which approached Tenedos. He caught it near Kephez Point and forced it to land and killed the observer. Where had it come from? The German Commander Liman von Sanders had no aircraft in his command until July 1915, when all Turkish and German aircraft in the area were transferred from Chanak across the straits to work under the command of the 5th Army. The unit was originally known as Fliegerabteilung 1. A German pilot, Oberleutnant Erich Serno, had been posted to the German military mission as aviation advisor and began his work at San Stefano in February 1915. One month later the first aircraft arrived from Germany, three Albatros B1s and one Rumpler B1. The

Nieuport Scout in RNAS markings

Rumpler was rapidly dispatched to the airfield at Chanak on 17 March and on the 18th carried out an early morning reconnaissance of Tenedos. They spotted the allied fleet at Tenedos ready to depart to begin the major bombardment. These first German aircraft, despite Turkish requests, retained German markings for some months and the unit was known as the Dardanelles Abteilung. They continued to fly reconnaissance and occasional bombing missions over the occupying allies and the offshore islands. The aircraft delivered their bombs by hand and had no machine

guns. The typical strength of the Chanak unit was four aircraft. Their bombing was generally ineffective but the reconnaissance information on the strength and location of allied forces was extremely valuable to the Turkish high command. When the unit relocated from Chanak it operated from Galata airfield on the peninsula and around the end of May the German Navy established a seaplane station at Chanak which allowed Fliegerabteilung 1 to provide air support for the 5th Army. Three German Gotha WD1 seaplanes arrived early in June but did not begin to fly operationally until early July, and then mainly at night. So Marix's victim must have been one of the Nieuports. In May 1915 the German Higher Naval Command responded to a request for naval planes from Germany and sent three 100 hp Gotha WD1 planes plus three pilots, three observers and six mechanics under the command of Lt Cdr Ernst Liebmann. They were transferred via land and air transport to San Stefano where one plane stayed for training and the other two were transferred to Canakkale. There was one small hangar which was only big enough to cover one plane and a second hangar was built in Nagara. Those three planes were now the Wasserfliegerabteilung (Naval Aviation Squadron), which was under command of the Commander of the Dardanelles, Admiral von Usedom. In mid July the first German flights towards Mudros, Tenedos and Imbros were conducted. The operations were limited to the night hours and to early morning because the planes were very slow and clearly inferior to allied planes. However, they managed to conduct some 50 missions and even were able to drop some bombs. During good weather they also conducted missions against allied submarines at the Sea of Marmara. The approaching offensive in August was detected by aircraft of the Naval Aviation Squadron in the night 27/28 July, which spotted 87 ships in the Bay of Mudros. One of the planes was lost in August because of a crash landing.



Gotha WD1 seaplane. *Photo IWM*

In mid-May the U-boat U21 arrived and torpedoed the two battleships HMS *Triumph* and *Majestic*, which led to both French and Royal Navies removing most vessels from around the peninsula. As a merchant hull, *Ark Royal* was slow and vulnerable, so she was sent to Imbros to act as

an aircraft depot ship. Some of her aircraft continued to operate around the Anzac front with reconnaissance, spotting and photo missions to relieve the load on 3 Wing's landplanes. They also took on some of the antisubmarine patrols (although there were no specialised tactics or weaponry for this) and managed to lend aircraft for other jobs such as to the monitors *Roberts* and *Raglan*. On 29 May, Osmond spotted the Turkish battleship *Barbarossa* lying off Ak Bashi Liman and scored a direct hit on it with one of his bombs. The battleship headed for Constantinople and never returned. At the end of May two new Voisin aircraft arrived, probably intended to assist in the support for a planned break out from Helles. On the same day Osmond spotted a submarine near Rabbit Island. Samson dropped one bomb but did no damage. Further flights were made but did not find the submarine until later in the day when it was heading for the Sea of Marmara.

Admiral John de Robeck, who took over command from Admiral Carden in March 1915

The Allies continued to send aviation assets to the theatre. The second seaplane carrier, HMS *Ben My Chree*, arrived in Mitylene on 12 June and her pilots began trial flights with their Short 184 seaplanes carrying torpedoes. They brought the anti-shipping role to the theatre, but quickly discovered that the aircraft could only be flown solo and with partial fuel if they were to carry a torpedo. Their Short 830 seaplanes were soon found wanting and were disposed of by the end of July so that *Ben My Chree* had two or three each of Short 184 and Sopwith Schneider seaplanes. Their primary task was to damage Turkish shipping. The RNAS now had three major units in theatre, each commanded by its own CO and with no formal coordination of command, other than responding to requests for support from both Army and Navy. Samson was suffering from the typical problems of Gallipoli, with conflicting demands for his services. He was under direct command of the local admirals but he was mainly working for the generals. He was being asked to carry out naval gunfire spotting as well as reconnaissance of the land war. Eight Henri Farman aircraft arrived in June but these were all deemed useless. Samson convinced de Robeck to send them home, at the same time asking for better machines.

To be continued...

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BOOK REVIEW

By Graham Mottram

History of the Mediterranean Air War 1940-45, Volume 4, Sicily and Italy to the Fall of Rome.

By Christopher Shores and Giovanni Massimello et al.

Published by Grub Street, London, 2018.

£50/$79.95

This reviewer probably wears the mantle of a pedantic old buffer but it seems increasingly rare these days to see aviation books which are not lightweight. Many and are too often poorly researched.

The fourth volume in the "Mediterranean Air War 1940-45" series is definitely not lightweight, weighing in at over 2 kilograms (that's 4.5 pounds in old money), and Grub Street are to be applauded for committing to two more volumes before the narrative comes to an end. The publishers are also to be applauded for maintaining a formula which began many years ago, ("Fledgling Eagles" about the 1940 Norwegian Campaign was, I believe, the earliest book to adopt this form) of a well written text supported by detailed research of sorties, victories and losses on a daily basis, from both sides of the conflict.

There is also a massive collection of photographs distributed throughout the text, most of which have not been seen before. The fact that the photos are embedded in the book at relevant points is also a massive bonus, instead of having the random melange of

commonplace photos in a batch somewhere in the middle which most publishers choose to employ. That does place a demand on the quality of paper and printing and obviously has an impact on cost but for your £50 you do get 696 pages of a heavy semi-gloss paper. The result is excellent reproduction of the photographs and a rewardingly authoritative feel throughout, although you will lose the feeling in your fingers if you read for too long at any one session! The lead author is SOFFAAM Council member Christopher Shores, supported by an international cast of thousands, who have contributed their own specialist knowledge to the various volumes in this series. Volume Four begins in May 1943 with the end of hostilities in North Africa, permitting a reorganization of Allied air units to support the offensive north across the Mediterranean that eventually led to the Fall of Rome in June 1944. The lead up to Operation Husky (the invasion of Sicily) and the operation itself begin the main body of the text, and it ends with the last sorties against the fleeing Germans and Italians before the capital city finally surrendered.
In between these two key dates, the authors have researched and compiled a prodigious amount of information which, most importantly, is readable when you need to read, and well structured when you want to investigate the detail at the sortie and personnel level. The index alone occupies some 60 pages and makes the book an invaluable source of reference. It is easy to forget that, in addition to British and US air forces, there were also Free French and Italian co-belligerent airmen fighting on the side of the Allies for much of this period. Various naval actions are also covered, not least the sinking of the Italian battleship *Roma* by the Luftwaffe using a Fritz X radio-guided bomb as the Italian fleet attempted to make Algeria after its country's surrender. There is very little of direct Fleet Air Arm interest though; the contribution of the Seafires of Force V at Salerno being given little space. This perhaps reflects their relative lack of effectiveness, but it was the first time in which the RN had operated five aircraft carriers together, controlled by Admiral Vian from a separate command ship (HMS *Euryalus*). The Admiral had been allocated an limited operating area that was too close inshore and he saw many of his aircraft end up in the barriers.

Because the authors have taken great pains to provide a concise but informative story of the ground war which the airmen were supporting, Volume 4, like its predecessors, can stand alone if you only want to know about this specific part of a long and complex campaign and is a very fine piece of research and writing.

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