

The Club Runs: Allied Aircraft Resupply Operations to Malta, 1942

by Brick Billing

By early 1942 the tiny island of Malta, approximately 100 km south of Sicily, was effectively under siege. German and Italian advances in North Africa had transformed the Mediterranean into an Axis-held lake, with the nearest Allied bases in Gibraltar on the eastern end and Egypt on the west. The Axis, realizing Malta's strategic position, subjected the tiny island to daily aerial bombardments. Over the course of two years Malta became one of the most heavily bombed places on Earth as the German *Luftwaffe*, and the Italian *Regia Aeronautica* flew over 3,000 bombing raids in an attempt to neutralize the island. [1] For as long as Malta remained in Allied hands, British air and sea forces could mount attacks against Axis shipping, threatening General Erwin Rommel's supply lines in North Africa. As early as May 1941, Rommel had warned his superiors that: "without Malta the Axis will end by losing control of North Africa." [2]

Standing against this Axis threat were a series of fighter, bomber, and torpedo squadrons based at Malta's three airfields; Luqa, Hal Far, and Takali. [3] And while the situation was never as desperate as it was in early 1940 when the total of Malta's air defense consisted of three Gloster Gladiator biplanes – the famously named *Faith*, *Hope*, and *Charity* – by early 1942 the main fighter defensive force of Hurricanes, Swordfish, and Albacores (the latter two aircraft types pre-war biplanes) were hopelessly outclassed and obsolescent. What was needed desperately was a reinforcement of modern fighters, such as the latest variant of the famous Supermarine Spitfire, the Mark VB, armed with an up-rated Rolls-Royce Merlin engine and 20mm Hispano-Suiza cannons. However, no Spitfires had been sent outside of the British Isles up to this point, and the short range fighters could not make the trip from England to Malta unassisted. [4] Since ordinary shipping was being interdicted by the *Luftwaffe* and the *Regia Aeronautica* a new method of delivery had to be devised to reinforce the fighter forces on Malta. Long range fighters such as the North American P-51 Mustang and techniques like aerial re-fuelling were still years away. The solution, when it was proposed, was as novel as any ever attempted before.

When the Spitfire was designed and built in the late 1930s, little or no thought was given to producing anything other than a single purpose fighter. The Spitfire was a brilliant point interceptor and was designed, in the words of one fighter pilot, "to hang on its prop, claw its way up to height, dogfight for 20 or so minutes, half-roll, and pancake immediately." [5] Considerations such as extended range, night/bad weather operability, or operations from other than existing RAF airbases were conspicuous by their absence. In fact, such considerations were absent from virtually all early fighter designs from almost every country. Indeed, fighter design practices of the period was strongly biased against a multi-purpose fighter design, the reasoning being that designing a purpose-built fighter would prove challenging enough. While there had been notable attempts to produce such fighters, such as the German Me 110 *Zerstörer* or the British Boulton-Paul Defiant, both of these designs suffered from poor performance when considered against single-seat, single-engined fighters such as the Me 109e or the Spitfire Mk. II or Hurricane Mk. I. Even in the U.S., where the larger distances and rough terrain made the idea of a multi-purpose fighter desirable, little or no research was attempted early in the war, and no such aircraft was ever designed or built.

The nearest class of aircraft that approximated this combination of long range and rough terrain criteria were the U.S Navy fighters such as the existing F-4F Wildcat, or the next generation F-6F Hellcat and the F4U-4 Corsair. All of these fighters were capable of the kind of long range flight (over 6 hours in the case of the Corsair) expected of naval planes, and featured comparatively beefy landing gear due to the necessity of possible hard landings on carrier decks. [6] Nevertheless, as the war carried further afield, and into harsher and more demanding areas, such innovations were sought and developed for non-naval aircraft as well.

One such development was the introduction of an external fuel tank for ferrying or long range missions. With the closing of the Mediterranean to virtually all shipping, over-flight delivery of aircraft to Malta was the only practical method of resupply, especially for assets such as fighter aircraft. However, the Spitfire's range (435 miles) was woefully inadequate to cover the distance between any Allied-held airfield and Malta. While impractical for combat, the long range fuel tanks did at least solve the problem of how to carry adequate supplies of gasoline over such long distances. The drag produced by carrying these long range fuel tanks was more than offset by their benefits in extended range, and the tanks themselves were designed to be as streamlined as possible. For the Spitfire, researchers at Supermarine in Southampton and at the Experimental Aircraft Establishment at Farnborough, UK had begun experimenting with external fuel tanks as early as 1937, and by 1941 an under-belly "slipper" tank had been developed for ferrying Spitfires from England to Egypt. The second problem was that, even with long range fuel tanks, no Allied-held territory was close enough for the Spits to reach Malta. The answer, it was decided, was to move an airfield closer to Malta.

Ever since the surprise attacks by the Japanese on the U.S. Naval fleet at Pearl Harbor, the aircraft carrier had emerged as a surprisingly versatile asset. Self-sufficient, extremely mobile, and equipped with their own escort force of destroyers and supply ships, aircraft carriers had proven that they could project military aerial power far beyond the range of traditional land-based aircraft. They had even launched land-based bombers, as was witnessed by the famous Doolittle raid of 25 B-25 Mitchell light bombers which launched an attack against the Japanese homeland from the *USS Wasp* on 18 April 1942. Because of the Axis threat in the Mediterranean, the Royal Navy was obliged to freight aircraft from Britain in carriers such as *HMS Argus* and *HMS Furious*, or in merchant ships, and either transfer them at Gibraltar to *HMS Ark Royal* and *HMS Eagle*, or carry out the operation themselves. These carriers were sortied into the Mediterranean with only very limited local aerial defense because of the onboard presence of the aircraft being ferried to Malta. The inexperience of RAF fighter pilots over open sea and the very limited nature of navigational aids in the early Hurricanes sent out to Malta required the presence of guide aircraft, usually either RAF Blenheim bombers or Fleet Air Arm Fulmars or Skuas to lead the fighter formation to Malta. These operations, known unofficially as "Club Runs" by the Royal Navy, were at best a race to launch the aircraft and return to Gibraltar before being attacked. [7] Without an effective fighter force on Malta the Allies would be forced to surrender the island or lose its effectiveness as a military base. It is significant to note that Malta was considered so vital to the Allied effort that Spitfires were assigned to the island at the expense of Great Britain's own home defense squadrons.

The problems associated with this decision to launch Spitfires from aircraft carriers were not insignificant. The Spitfire was never designed to operate at sea, and many of its systems were not only unsuitable for, but actually inimical to, carrier operations. The long nose that housed the Merlin engine, for example, obscured visibility forward, a key criteria for carrier

operations.[8] The narrow undercarriage was particularly unsuitable for hard carrier landings. Moreover, the landing gear themselves obscured the engine radiators when they were lowered, causing the engine to begin to overheat. Indeed, prolonged taxiing in a Spitfire, or leaving the engine idling for periods of longer than roughly twenty minutes resulted in the engine "boiling over," i.e. venting boiling radiator fluid (known as glycol) out of an overflow on the side of the aircraft. While preserving the engine from seizing, in practice large amounts of the glycol were dumped into the lower engine cavity, which in turn, necessitated a complete cowling removal and engine cleaning to prevent fouling.

Spitfires also lacked an arresting hook, so recovery aboard the carrier was next to impossible; therefore the decision was made to launch the carriers on a one-way trip from the carrier to Malta. Pilots were forbidden, on pain of a court-martial, to attempt a landing on the carrier.[9] They were instructed instead to ditch the aircraft alongside an escort vessel, exit the aircraft, and wait to be rescued. In practice then, the trip expected by the Spitfire pilots was as follows: embark on the carrier at Gibraltar: sail with the carrier to a point some 700 miles from Malta: launch successfully from the carrier and: fly the remaining way to Malta, avoiding combat along the way. The pilots would have to navigate 700 miles of unfamiliar, enemy-controlled Mediterranean Sea with minimal navigational aids, and with no possibility of a safe return should problems occur.

Previous experience with flying Hurricanes off carriers had revealed several problems for the upcoming mission, now officially codenamed Operation Spotter. First was the engine overheating issues as noted above. Whereas U.S. fighters were capable of unlimited idling, the Spitfires ranged on the flight deck required a staggered start-up time for each flight leaving the carrier. Those aircraft whose engine refused to start, or whose pre-takeoff run-ups uncovered unforeseen glitches did not have the luxury of time to trouble-shoot the problem. Pilots were instructed to de-plane, and the offending aircraft would be pushed over the side. A second, and more pressing problem had to do with take-off speeds and the flaps on the Spitfire.

The under-wing split flaps on the Spitfire, like its brakes and undercarriage, were pneumatically operated. A small bottle of compressed nitrogen, located internally aft near the tail-wheel, provided more than enough air pressure to raise and lower the flaps, the undercarriage, and to operate the brakes. It allowed one small bottle to do the work of three separate systems, and was an elegant engineering solution. However, the flaps could only be selected in two configurations: Full Up, or Full Down. When lowered, the flaps dropped the speed of the streamlined Spitfire dramatically, and gave it the appearance of a large bird swooping in for a landing. However, for take-off it was deemed unnecessary to incorporate an intermediate landing position for the flaps. This "take-off" position increased the lift over the wings at lower speeds, and hence gave a higher lift/drag ratio. While unnecessary for land operations on wide grass airfields, a high lift/drag ration was considered essential for carrier operations, especially at the high weight limits the Spitfires would be operating under. The solution, as it eventually evolved, was unique.

Two small 15° wedges were created in the carrier's workshops.[10] The flaps of a test Spitfire were lowered fully and the wedges held underneath the wing, hard against the trailing edge. When raised the flaps were thus set at the optimal 15° necessary for a carrier take-off. Once safely airborne, the pilot simply cycled the flaps and the wedges were blown out by the slipstream. Tests confirmed the efficacy of this simple fix.

Armed with such simple fixes and strategies, the first group of Spitfire pilots embarked on *HMS Eagle* on 27 February, 1942. The pilots were instructed to form into groups of three after take-off and set course due East. Once they picked up the tip of the African coast (near the island of Pantellaria) they were instructed to fly southeast until they picked up Malta Control, codenamed Gondor, on their radios for landing instructions. They were told to avoid Pantellaria at all costs, not only because it was enemy held, but also because the natives were reported to be extremely hostile, and were rumored to even be cannibalistic. While the latter was no doubt untrue, its effect on the pilots was considerable. One pilot remarked: "I would have rather have ditched in the middle of the Med than land on Pantellaria!"[11]

The pilots received a second shock when they first caught sight of the aircraft they were to ferry to Malta. A large tropical air filter (known as an Aboukir filter after the depot in Egypt where it had been developed) was fitted to the under cowling of each aircraft. This gave the Spitfire a 'chinned' appearance, and it was the considered opinion that it spoiled the sleek appearance of the aircraft. More disconcertingly however, the pilots were told that the Aboukir filter would degrade the Merlin engine performance "somewhat." A not pleasant thought when one was headed into combat.

Regardless of the pilots' feelings, *HMS Argus* loaded 15 Spitfire Mk.VBs and sailed as part of convoy WS 16 on 16th February, 1942 to Gibraltar, arriving there on the 24th. In addition, the 5000 ton freighter *Cape Hawke* sailed from Britain on the 10th with 16 more crated Spitfires, 13 RAF officers, and 131 NCMs to act as ground crew. *Cape Hawke* was escorted by the destroyer *HMS Whitehall* and corvettes *HMS Asphodel* and *HMS Hydrangea*. The crated Spitfires were transferred from *Cape Hawke* to *Eagle* at Gibraltar after arriving on the 23rd, and assembled in the carrier's hanger, away from prying eyes

The 16 Spitfire VBs from *Argus* were also transferred to *Eagle* while *Argus* embarked Fairey Fulmars for fleet protection. Sailing on the night of the 26th *Eagle* was escorted by Force "H," comprising of *Argus*, the battleship *HMS Malaya*, the cruiser *HMS Hermione*, and nine destroyers: *HMS Active*, *Anthony*, *Blankney*, *Croome*, *Exmoor*, *Laforey*, *Lightning*, *Whitehall* and *Wishart*.

The 16 pilots were all volunteers and were led by Squadron Leader (S/L) Stan Grant, a newly promoted Battle of Britain veteran, who had already shot down three enemy aircraft. The remainder of the pilots were: Flight Lieutenant (F/L) Philip "Nip" Hippell DFC, F/L Norman Macqueen, Flying Officer (F/O) Norm Lee, Pilot Officer (P/O) Peter Nash (a former London Times reporter), P/O Johnny Plagis, P/O Doug Leggo, P/O Jim Guerin, P/O Ken Murray, Flight Sergeant (F/Sgt.) David Ferraby, F/Sgt. Ian Cormack, Sergeant Pilot (Sgt.) John Tayleur, Sgt. Paul Brennan, Sgt. Ray Hesselyn, Sgt. Bob Sim, and Sgt. Jack "Slim" Yarra. The 16 Spitfires were serial numbered: B262, B264, B329-338, B341, B343, B344, and B346.

The pilots were readying their planes on the flight deck of *Eagle* early on the morning of the 27th when the Engineering Officer (EO) reported a problem with the long range tanks fitted underneath the Spitfires. Instead on feeding fuel to the engines, the tanks were siphoning it out onto the flight deck. Clearly, the 700 mile flight would be impossible with the tanks in this condition. The EO insisted that the fault be fixed, and reluctantly Force "H" set course back for Gibraltar. Once back in Gibraltar an expert had to be flown out from England to rectify the problem. This experience was made all the more unpleasant for the pilots because it had been assumed that they would only be onboard *Eagle* for a few hours, therefore no bunk space had been allocated to them. As a result, they were forced for several days to find spots on the ship where they could sleep. F/Sgt. Dave Ferraby recalled:

At least on *Cape Hawke* we had our wooden bunks, but on *Eagle* the crew and us had to doss down wherever we weren't in the way. The spot I picked for my bedding was on top of a wire mesh lock-up store in the hanger, with blokes assembling Spits all night long.[12]

On March 5th, 1942 Force "H" again set sail into the Mediterranean, and Operation *Spotter II* was underway. At 0700hrs on the 7th a Blenheim from 1442 Flight on Malta (one of eight that had been dispatched from the island to rendezvous with the carrier) was spotted, and *Eagle* was turned into the wind. S/L Grant (the *Spotter* Spitfires had been allocated the call-sign "Exile," hence Grant was "Exile 1") was the first down the flight deck. "Exile 1" lifted off and then sank slightly below the level of the deck as the aircraft exited the ground effect. However, it quickly gained altitude and the other "Exile" Spitfires began to launch, with all but "Slim" Yarra's Spitfire launching from *Eagle* within an hour and setting course for Malta.

After the discomfort and drama of the trip out, the flight in to Malta turned out to be anti-climactic. During the four-hour flight the only incident occurred when a group of Junkers Ju-52 transport aircraft was seen off in the distance. Two of the Exile pilots tried to give chase, but without result.

The arrival of the 15 Spitfires on Malta turned out to be literally in the nick of time as the Island's defensive force had almost ceased to exist. Only 14 Hurricanes were still serviceable, while 60 of the island's overall garrison total of 75 aircraft had been destroyed within a five week period. Thus the arrival of the 15 aircraft more than doubled the effective defensive force. As well, the remaining 16 Spitfires on *Eagle* were due to be flown to the island on the next Club Run, scheduled to take place as soon as the carrier could embark more pilots in Gibraltar.

More importantly however, the arrival of the Spitfires from Operation *Spotter* allowed the British on Malta the opportunity to counter the Axis threat with something approaching parity. And as the blitz intensified, reaching a crescendo with the great air attacks of the summer, the pilots and planes would be pushed to their utmost, and losses would be prove to be severe. Further fly-off operations such as *Spotter* were accomplished over the course of the upcoming months; however the arrival of the first Spitfires on the island was heralded by many as the critical point in the siege. While it was to continue well into the autumn of 1942, the Blitz of Malta was considered an even gamble by the Allies once Spitfires were entered into the equation.

Appendix 1: RAF and Fleet Air Arm strength on Malta: January 1st, 1942.

Fighters			
Squadron	C/O	Aircraft	Airfield
126 Sqn	S/L S.C. Norris DFC	Hurricane IIB	Takali
185 Sqn	S/L S.A.D. Pike	Hurricane IIB	Hal Far
249 Sqn	S/L H.J.S. Beazley	Hurricane IIB	Takali
242 Sqn	S/L W.G. Wells	Hurricane IIC	Hal Far
605 Sqn	S/L Andrews DFM	Hurricane IIB	Hal Far
1435 Flight	S/L I.B. Westmacott	Hurricane IIB/C	Takali
Bombers			
The bombers on Malta were in the process of being reconstituted or replaced. On station at the beginning of the year were elements of:			
Squadron	C/O	Aircraft	Airfield
18 Sqn	W/C L.J. Stickley DFC	Blenheim IV	Luqa
107 Sqn	W/C L.J. Stickley DFC	Blenheim IV	Luqa
104 Sqn	W/C L.J. Stickley DFC	Wellington II	Luqa
40 Sqn	W/C L.J. Stickley DFC	Wellington IC	Luqa
Special Duties Flight			
Squadron	C/O	Aircraft	Airfield
828 Sqn	F/L A. Spooner DFC	Wellington VII	Luqa
830 Sqn	FAA Lt(N) G.M. Haynes FAA Lt/Commander F.E.H. Hopkins DSC	Albacore Swordfish	Hal Far
Reconnaissance			
Squadron	C/O	Aircraft	Airfield
69 Sqn	W/C J.N. Dowlan GC	Maryland, Photo Reconnaissance Hurricane	Luqa

* * *

Show Footnotes and Bibliography

* * *

Copyright © 2012 Brick Billing

Written by Brick Billing. If you have questions or comments on this article, please contact Brick Billing at: [✉ brickbilling@yahoo.ca](mailto:brickbilling@yahoo.ca).

About the author:

Brick Billing has written articles for various magazines and journals ranging from *The Algonquin Round Table Review* to the journal of the *Canadian Aviation Historical Society* (most recent article Winter, 2010). He has written an original, contextualizing introduction for – and oversaw the production of – a new edition of *Canada's Fighting Pilots* (ISBN # 0-919614-97-3) by Edmund Cosgrove, which was published by the Dundurn Press under Golden Dog Publishing (chief editor Michael Gnarowski). His chief areas of interest are military history and Canadian aviation history. He is a Regular Force Officer in the Canadian Forces, and a member of the Royal Canadian Artillery. He lives with his family in Orleans, Ontario, a suburb of Ottawa. He also served an 11 month tour in Afghanistan with Task Force Kandahar, where he worked as the Task Force's Intelligence, Surveillance, and Target Acquisitions (ISTAR) Operations Officer.