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OUTLOOK FROM 'THE ROCK'

HALIFAX CREWS ROUTINELY RISKED THEIR LIVES TO ACQUIRE VITAL WEATHER INFORMATION. **KEN ELLIS** DESCRIBES THE WORK OF GIBRALTAR'S LAST 'MET SHIPS'

It was exacting work, maintaining an accurate flight profile, and then at regular intervals collecting and transmiting vital data. Sorties were staged in all conditions, day and night, regular as clockwork. The information gathered could be crucial for operations and exercises, but more than that, it might save lives.

Until the advent in the 1960s of balloons with telemetry and high-flying commercial jetliners providing updates and later still satellites, the RAF, Royal Navy and civilian agencies relied on meteorological flights to bring back the statistics upon which weather forecasts were based. The aircrew carrying out these sorties have always been unsung; yet they risked their lives routinely.

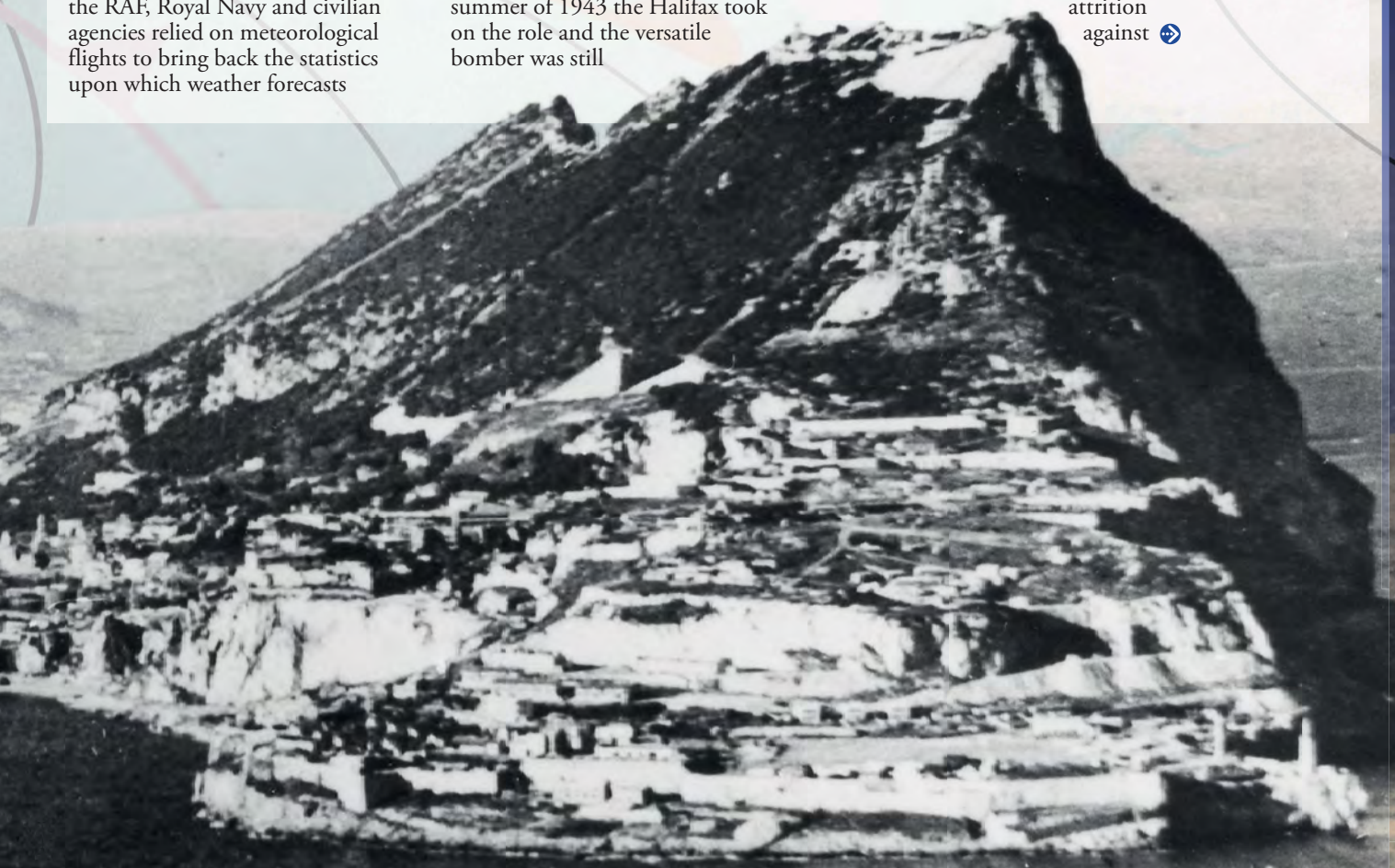
The weather was a perpetual enemy, but during World War Two, so was the Luftwaffe. The importance of the job, and the hazards encountered, meant 'cloud hunting' was a frontline duty.

Among the many roles undertaken by the Handley Page Halifax, 'met' reconnaissance is probably the least well known. From the summer of 1943 the Halifax took on the role and the versatile bomber was still carrying out such sorties nine years later. Indeed, the last operational flight in the type's long and distinguished RAF career was weather recce.

NEW ROLE FOR SUB HUNTERS

From March 1, 1941 collecting meteorological data became a task of Coastal Command. Previously, it had been a Bomber Command responsibility, but diverting resources from the strategic war of attrition against

Left
A Halifax Met.6 of 224 Squadron patrols over 'the Rock', circa 1950. The extensive seawall of the harbour is underneath the Halifax, the hills in the background are within Spain. ALL AUTHOR'S COLLECTION



"The Merlin XX-engined Mk.V proved to be a disappointment in the long-range, over water role and from early 1945 the much more reliable Mk.III with Bristol Hercules XVI radials became the norm"

Right and below right
The aftermath of 224 Squadron Met.6 RG850 losing an engine on approach to North Front on March 5, 1949. All five on board were killed.

Below
The Halifaxes of 224 Squadron kept the unit code 'XB' until 1951: 'J-for-Juliet', Mk.6 RG836, was struck off charge in May 1950.

Germany was vigorously opposed. Gathering weather information being mostly a maritime occupation, Coastal Command was seen as the 'natural' operator.

Eventually five squadrons were devoted to the long-range role, each with an establishment of eight Halifaxes. First to convert was 518 Squadron in July 1943 at Stornoway in the Hebrides on Mk.Vs. This was followed by 517 in November 1943 at St Davids in Wales, 520 in February 1944 at Gibraltar, 519 at Tain in Scotland in August 1945, and 521 at Chivenor in Devon in December 1945.

Other than 518, which started off with Halifaxes, these squadrons had previously flown either Boeing Fortresses or Lockheed Hudsons for long-range weather hunting. By October 1946 four of the five units had disbanded.

At Aldergrove in Northern Ireland, 518 Squadron was renumbered as 202 Squadron, resurrecting the 'numberplate' of a famed U-boat killing unit. From the autumn of 1946 until March 1948, 202 maintained a detachment at Gibraltar to extend the data gathering. In March 1951, the Halifax Met.6s of 202 gave way

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to another Handley Page type, the four-engined Hastings transport, reconfigured for weather work under the designation Met.1.

Another veteran U-boat hunting squadron, 224, was re-formed at Aldergrove on March 1, 1948 to share the post-war weather task, also with Halifax Met.6s. This unit took up the Gibraltar detachment from 202 and, from October 18, under Sqn Ldr F A B Tarns, 224 moved lock, stock and barrel to 'The Rock', leaving a detachment in Northern Ireland.

WEATHER SHIPS

At first the Coastal Command met squadrons were equipped with Halifax Vs and Cunliffe-Owen Aircraft at Eastleigh, Southampton, converted the bombers to their new role. The programme suffered from delays, initially in getting release of Mk.Vs from other units and then in perfecting the equipment.

The Rolls-Royce Merlin XX-engined Mk.V proved to be a disappointment in the long-range, over water role and from early 1945 the much more reliable Mk.III with Bristol Hercules XVI radials became the norm.

The definitive Halifax 'weather ship' was another Hercules-powered variant, the Mk.VI. The first full conversion appeared in the summer of 1945.

Left
Ground crew of 224 Squadron, 1950-1951.

Most Halifax VIs that went on to serve with met units were built by English Electric at Samlesbury in Lancashire. The first was RG778 in June 1945, serving with 224 Squadron.

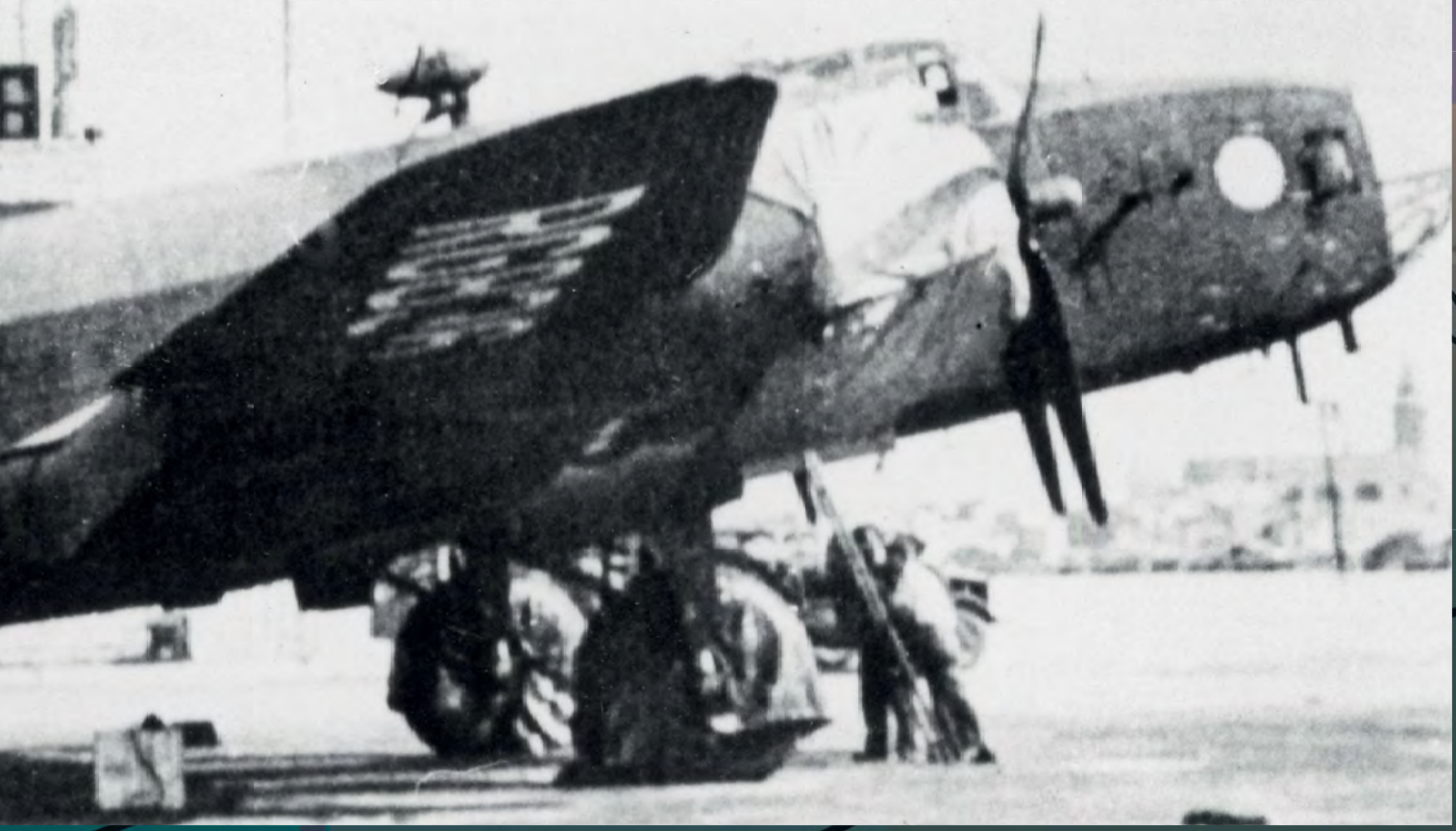
Figures vary on how many Halifax VIs became met variants, but it was between 35 and 40. In 1948 the RAF changed its designation system from Roman to Arabic numerals, the surviving Halifaxes hence becoming Met.6s.

Mounted on the starboard side of the nose of the Halifax just behind what had originally been the bomb aimer's glazing, was a device called a psychrometer. This was a more sophisticated version of the hygrometer to be found in basic weather stations the world over.

BLIND FAITH

The psychrometer was a rig holding two glass thermometer tubes. The mercury bulb of one was directly exposed to the airflow while the other was surrounded in a muslin wick soaked in water. The difference in the reading of the 'dry' and 'wet' bulbs was used to calculate the atmospheric humidity.

Another thermometer would provide an accurate outside air



THIRD TIME UNLUCKY

While flying 'touch and goes' in 224 Squadron Met.6 RG839 on March 13, 1952, a pilot new to the Halifax came in very low on his third approach to Gibraltar's westerly runway. The port undercarriage hit the sea wall and collapsed during a heavy touchdown. The Halifax slid to a halt; nobody was hurt. The unit was nearly through conversion to Shackleton MR.1As and only four days later the last-ever RAF Halifax operational sortie was completed. Not surprisingly, RG839 was not repaired and was quickly scrapped.

Above
Still carrying weather instrumentation on the starboard side of the nose, former 224 Squadron Met.6 ST804 stops over at St Mawgan, Cornwall, on its way to 48 Maintenance Unit, Hawarden, for scrapping November 1951.

Above right
A 224 Squadron Halifax Met.6, probably ST804, with white overpainted upper forward fuselage, to help keep the cockpit area cool. Just visible in the background is a St Mawgan-based School of Maritime Reconnaissance Lancaster GR.3.

temperature reading. To assess wind speed, a drift meter was fitted. The externally mounted instruments could be monitored through a glazing on the starboard side of the nose.

For accurate, low-level flying a radio altimeter was essential. Crews would calibrate these instruments at every opportunity; descents through cloud to sea level would otherwise have been an act of blind faith.

An easy way to check out the altimeter was to fly alongside a spot height on a cliff, or a lighthouse, either of which would be of known elevation. This would provide a thrilling flypast for the aircrew, passers-by and lighthouse keepers.

All data was not recorded automatically; the readings were taken visually by the crew. With the advent of the Halifax a dedicated weather observer could, for the first time, be accommodated, cheek-by-jowl with the navigator in the extreme nose.

CLIMB AND DESCENT

Apart from a dog-leg sector over the North Sea and another out of Wick in northernmost Scotland, penetrating due north into Arctic waters, all of the Coastal Command met sorties headed westwards into the Atlantic.

A typical out-and-back profile would involve flying at the pressure altitude of 950 millibars - that would equate to around 1,800ft (550m). Every 50nm (92km) the temperature and humidity would be charted and cloud and sea state noted. These figures, plus a sea level pressure reading and wind velocity was calculated at each 100-mile waypoint.

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At the outermost point, the Halifax would begin a spiralling, monotonous climb to 18,000ft to repeat the data-gathering exercise over a reciprocal heading for 500 miles. After that, the skipper would make a brisk descent to sea level for another set of measurements, followed by a low-level return to base.

In the case of the Gibraltar 'run', codenamed 'Nocturnal', the sortie took the Halifax on a dead-straight course northwest towards the Azores for 1,100 miles. When this nominal point, deep in the Atlantic Ocean, was reached the aircraft would begin its climb ready to turn around and retrace its flightpath across lonely, inhospitable waters to the Rock.

GIBRALTAR BASE

As the gateway and guardian of the western Mediterranean, Gibraltar naturally attracted the attentions of the Royal Naval Air Service and seaplanes were a common sight in the harbour from at least 1917. During the inter-war years, Gibraltar's extensive harbour played host to flocks of flying boats. The racecourse, located on the narrow isthmus just north of the Rock served as a rudimentary airfield.

Pressures of war from 1939 meant that the racecourse, a stone's throw from the Spanish frontier, was inadequate. A 1,200 yard (1,100m) east-west runway was built; the western end extending, finger-like, into the Bay of Gibraltar. When the work was completed in 1942, the airfield was named RAF North Front.

The runway severed road communications in and out of the settlement. A traffic light system - still in use - allowed vehicles to scurry across when there was a lull in flying.

When the Halifax Met.6s of 224 Squadron took up permanent residence at North Front in October 1948, they succeeded a detachment of 202 Squadron. Before 202, 'Gib' had been the domain of 520 Squadron, which had a wonderfully descriptive motto: 'Tomorrow's weather today'.

Rare for an RAF squadron, 520 spent its entire life based at Gibraltar; from inception in September 1943 to disbandment in April 1946. During that time, the unit operated an incredible variety of types, in sequence: Hudson, Gladiator, Halifax V, Spitfire V, Hurricane II, Martinet I, Halifax III and Warwick.

Left
Halifax Met.6 RG839 of 224 Squadron rolling for take-off at North Front in early 1952.

Below
A view of North Front looking towards the Spanish border in early 1952, in the foreground is the colony's huge public cemetery.

PERILOUS SORTIES

From the spring of 1944 the round-the-clock arrivals and departures of lumbering, weather-hunting Halifaxes had become commonplace to Gibraltarians. If the sorties seemed unremarkable, every so often the perilous nature of the task came to the fore. Many citizens could see the comings and goings on the airfield so news spread quickly among the small, tight-knit community of the Rock.

On March 5, 1949, Met.6 RG850 suffered an engine failure on approach. The pilot elected to go-around, but the Halifax lost speed, began to slip to starboard and dived into the ground close to the eastern threshold. All five on board were killed.

The crew of RG837 were *deliberately* making a three-engined approach on January 16, 1951 during a regular pilot check out. A Hercules radial genuinely failed and the pilot quickly went through the drills to bring the feathered example back to life; but this failed. Within sight of a large number of spectators RG837 dropped into the water short of the threshold; all on board scrambled out unhurt.

The final accident was another staged in full glare of the residents when a 'circuits and bumps' detail went wrong. Again, there were no casualties, but the Halifax was written off - see panel opposite.

In Northern Ireland, 224's colleagues on 202 Squadron suffered terrible losses for peacetime while operating Halifax Met.6s. Over 17 months, 23 airmen perished in three separate accidents.

Halifax Met.6 ST818 departed Aldergrove on a routine sortie out into the Atlantic on July 9, 1950. It was never seen again; no trace was found. Eight died when RG843 flew into a hillside in the Irish Republic on June 16, 1950 in widespread fog. Finally, on December 29, 1950, ST798 failed to return from a met recce. The body of its captain was picked up by a fishing vessel 18 days later.

NEW GENERATION

Shackleton MR.1 VP287 touched down at North Front on July 25, 1951 presaging the future for 224 Squadron. It had been with the unit less than three months when it disgraced itself by landing wheels-up on September 21. It was out of commission until the spring of the following year.

By the end of 1951 there were just three operational 'Shacks' with 224. The working life of its venerable Halifaxes was extended to cover for the slower than anticipated take over by the new generation.

Overseeing the transition from Handley Page to Avro was Sqn Ldr G L Mattey DFC. With little ceremony in 'Gib' but considerable publicity in Britain, Flt Lt Finch carried out the last-ever sortie by an RAF Halifax when he ferried 224's final Met.6 to 48 Maintenance Unit at Hawarden, near Chester on March 17, 1952.

There is some debate as to which Halifax took the honours. It is officially recorded as RG841, but the press photo released at the time showed RG778. Whichever machine it was, it drew a line under the exceptional service the type had rendered the RAF. Starting off as a frontline bomber in November 1940, a dozen years later the Halifax was still putting itself in harm's way.