

by Graeme Lunn

ourse photographs are a service tradition, marking significant milestones in a person's career and jogging memories of long ago friendships. Some course photos are also of historic significance. One such is the 1948 course photo of No.1 Naval Air Pilots Course, which foretells the commencement of our modern Fleet Air Arm and also contains a mystery!

11

In the centre of these eager ratings and recruits sits an officer with an 'A' in the ring of his Lieutenant's braid and pilot's wings on his sleeve, named in the attribution as Lieutenant 'Paddles' Henley. Henley's name is only distantly recalled among the multitude of Royal Navy loan officers who were vital to the formation of the Australian Fleet Air Arm. In his person, however, Bill Henley exemplified the calibre of those loan officers who helped establish the FAA's lasting base of professional ability and unswerving dedication to naval aviation.

Towards the end of 1946 the Naval Board in Melbourne asked for three senior Royal Navy Ioan officers to man the proposed Aviation Planning Office. Sent out were Captain Edmund Anstice (later Vice-Admiral Sir Edmund Anstice), Commander (E) Arthur Turner DSC (later Admiral Sir Arthur Turner) and Commander (S) Bernard Robinson. The junior, and sole Australian, in the office was Lieutenant-Commander Victor Smith DSC* RAN (later Admiral Sir Victor Smith) who had been tasked from August 1945 with preliminary staff work in the UK for the Australian Naval Aviation Plan.

At the end of World War Two the Royal Australian Navy, unlike most allied navies including New Zealand,

had but a handful of aviation specialists despite a final wartime complement of 40,000 and over 300 vessels. This meant that, in addition to the three specialist loan officers in Navy Office, literally hundreds of Royal Navy senior sailors, warrant and commissioned officers would be required for loan service in its formative years to assure the success of the new Air Branch.

The 1947-48 Air Plan that the Aviation Planning Office produced called for capital expenditure of £3.9 million to cover the commencement of recruiting and training several thousand personnel to man an Air Branch, order its aircraft and acquire a carrier. The Air Plan would also fund the establishment of an air stores organisation and upgrade work at the paid-off RN *Nabbington-Nabswick/* Mobile Operational Naval Air Base at Nowra.

On 7 December 1947 four ratings and ten recruits reported at *Cerberus/*Flinders Naval Depot to form No.1

Above. No.1 Naval Air Pilots' Course photo taken at RAAF Point Cook in 1948, the graduates of which became a building block of our new Fleet Air Arm. The caption names the Course Officer sitting front row centre as LEUT "Paddles" Henley. The Probationary Pilots are: [1] Mick Streeter [2] Hank Hurley [3] Bill Sweeting [4] Clive Van Der Lilly [5] Fred Lane [6] Colin Champ [7] Noel Creevey [8] John Roland. [9] Dick Sinclair [10] John Herrick [11] Garth Eldering [12] Ian "Tas" Webster [13] Ian "Scotty" Macdonald, and [14] John Harwood. NAP Course. Moving on to RAAF Point Cook's No.1 Flying Training School on 23 March 1948 they commenced preflight ground school, to be followed in July by DH.82 Tiger Moth and CAC Wirraway flying training as Probationary Pilots. No.2 NAP Course formed four months later on 4 April 1948.

One of three 'RN nurses' supervising both courses until graduation as Pilots Fourth Class in July 1949 and February 1950 - prior to their proceeding to the UK for Operational Flying Training - was Lieutenant (A)(P) Maurice 'Bill' Henley DSC RN. Flying Fireflies, Bill had disembarked to Point Cook with the rest of 812 Squadron during *Theseus's* visit to Melbourne in July 1947. Next loaned for two years' service in Australia he had sailed out aboard Orion that December. Bill took up his duties on 2 February 1948, initially at *Cerberus's* New Entry School (Airmen Branch), and then from

January 1949 at RAAF Point Cook. Not a Qualified Flying Instructor Bill was appointed Naval Ground Instructor for No.1 FTS and became Senior Naval Officer in October 1949.

The mystery is that people who knew Bill say it is not him in the course photo. Believed to be taken at Point Cook, before the fourteen trainees started being whittled down by their RAAF flying instructors to the graduating eight, dates it to be no later than July 1948. Coming out with Bill in the Orion for loan service had been fellow Lieutenant (A)(P) John Pullen who had flown Hellcat FB.II fighters off Ameer and Empress in the Pacific.

While Bill went to staff the New Entry School in February 1948, John went to RAAF Point Cook as the NGI to await the class that Bill sent on to him in late March. John was the only naval officer at the base until May, when Lieutenant-Commander (A)(P) Stanley 'Stan' Keane DSC was posted in as Senior Naval Officer (see *FlyBy* October 2022). So the Lieutenant in the photo is certainly John Pullen and not Bill Henley. When John posted on to the Naval Air Organization and Training Division at Navy Office in January 1949 Bill took over his NGI duties.

Maurice William Henley, forever known as 'Bill', was born in London on 25 March 1923, and was educated at the Roan School for Boys in Greenwich before joining the National Provincial Bank. While London was being targeted by the Luftwaffe he served as a teenage airraid warden in Lewisham, with his enlistment suffering a hold-up when the local recruiting station was bombed.

Joining as a Naval Airman 2nd class at age eighteen in 1941, Bill was awarded his provisional aviator wings after training in Canada. Promoted Midshipman (A) Royal Naval Volunteer Reserve in October 1942 he commenced Operational Flying Training on Fairey Swordfish aircraft at Jackdaw/Naval Air Station Crail. Temporary Sub-Lieutenant (A)(P) Bill Henley was posted to 813 Naval Air Squadron when it reformed at Merlin/ Naval Air Station Donibristle on 1 November 1943.



A war-weary Swordfish II on patrol. Note the Air to Surface Vessel (ASV) high gain "Yagi" radar antenna fixed to the strut in the foreground aircraft. Although rudimentary by today's standards, it was still capable of detecting a large ship at a range of up to 60 miles. It was less effective against the smaller U-boats but still played a pivotal role in the Battle of the Atlantic, including thwarting many attack opportunities. (IWM).

Re-equipped with nine new Swordfish IIs the squadron was augmented with three Fulmar fighters in March 1944. Ă further four fighters, Wildcat Vs, were added before the composite Squadron embarked on the 12,450 ton escort carrier Campania from Shrike/Naval Air Station Maydown on 26 April 1944. From June a trickle of Swordfish IIIs were taken on strength.

Of practical, albeit near-obsolete biplane design, 813's 'Stringbag' (after a housewife's all-purpose string shopping bag) Swordfish aircraft, especially when fitted with the latest technology ASV (Air-to-Surface Vessel) radar, were still potent opponents. Correctly tasked they continued to score major successes against the enemy in these later years of the war. The airframe was docile and positive in handling, robust in deck operations and agreeably slow on approach to a pitching flight deck.

With ship and squadron deck work ups completed by late May Campania, 813 and Bill commenced their raisin d'être - convoy escort. First, under Western Approaches Command, they escorted six West African and Mediterranean convoys. Transferred to Home Fleet Campania sailed from Scapa Flow in mid-September escorting her first Russian Convoy, JW-60 from Loch Ewe to Murmansk.

On December 10, with five arctic convoys escorted, plus an interlude of Norwegian mine laying and coastal ship strikes in late October, Campania prepared to lead the twenty-eight merchant ships of Convoy RA-62 south from Murmansk to Loch Ewe and the Clyde. Flying his flag in *Campania* was Rear-Admiral Rhoderick McGrigor whose force comprised a second escort car*Swordfish of 813 can commence anti-submarine patrols* as soon as she leaves Kola Inlet. (IWM). Below. A chart showing the typical route of a Russian Convoy, including where Kola Inlet was located, and the effective areas of air cover of Allied and Axis shore based aircraft. Typically, British ships were outside RAF and Coastal command reach for more than half of their journey, which made the provision of organic air support (carriers) even more important. +





rier Nairana, cruiser Bellona, and the Sixth and Seventeenth Destroyer Flotillas. The escort carriers and cruiser sailed with the main body flying off anti-submarine and fighter patrols as soon as they cleared the Kola Inlet.

Only four days before, as the inbound convoy JW-62 had approached Kola Inlet, Wildcats shot down a shadowing Bv138 Seedrache (Sea Dragon). The same day the Swordfish of Sub-Lieutenant's (A)(P) William 'Hutch' Hutchinson and (A)(O) Alexander Farningham had depth charged a lurking U-boat of Wolfpack Stier (Bull) - which had been formed on 21 November with eighteen U-boats. This Swordfish crew would still have been shaken having hit the round-down two nights previously when heavy seas caused a sudden violent pitch

up of the flight deck, breaking the fuselage in two with both halves fetching up against No. 1 wire.

One day before Convoy RA-62 was scheduled to sail, anticipating the joint U-boat and torpedo bomber attacks which had been so deadly against previous convoys, McGrigor ordered the close escort force to leave the Kola Inlet for the partially frozen waters of the Barents Sea. In a preemptive sweep with Russian destrovers against the assembled wolfpack the corvette Bamborough Castle sank U-387 with the loss of 51 men.

Also part of the 13th U-boat Flotilla's wolfpack was U-365 under the tactically aggressive Oberleutnant zur See Diether Todenhagen. On 11 December she torpedoed and badly damaged the destroyer Cassandra with the loss of 62 lives. The frigate Bahamas was detailed to tow Cassandra back towards Murmansk further weakening the escort force. Despite these losses when the convoy was attacked by Ju88 torpedo bombers the next day a spirited defence saw no ships hits and two of the attackers shot down.

On 13 December, three days out of Murmansk, faint wireless transmissions detected off the convoy's port quarter led to Swordfish GK attacking the submerging U-365 at 15:31. Knowing Todenhagen's U-365 was on the hunt, two Swordfish IIs launched from Campania at 15:55 on a hunt of their own in that long midwinter dark above the Arctic Circle.

•The only thing that ever really frightened me during the war was the U-boat peril⁹

Winston Churchill The Second World War. Vol 2.

Swordfish GQ was flown by the now experienced 21 year old Sub-Lieutenant (A)(P) Bill Henley and the squadron's Senior Observer Lieutenant (O) Cyril 'Chappers' Chapman. Both had been with the squadron since it reformed, and Chapman had briefly been acting squadron CO when the previous CO and his crew had failed to return from an Arctic anti-submarine patrol. Swordfish GL was crewed by Hutchinson and Farningham, no doubt eager to replicate their attack of the previous week. All four were RNVR 'hostilities only' officers.

A contact east of Jan Mayen Island was picked up by Henley's Observer, but they suffered a setback when the radar broke down. Flares and depth charges were released at the datum without visible success and, bitterly disappointed, both aircraft banked to return to the carrier. But as they did so, Swordfish GL's Observer detected another radar contact. Quickly releasing more flares U-365 was revealed running on the surface.

Bill immediately carried out a text-book perfect attack with Swordfish GQ. His three depth charges straddled the U-boat so accurately that one even bounced off the submarine's casing before exploding. Further flares revealed the upturned hull of an apparently sinking U-boat surrounded by oil and debris. The encounter was logged by intelligence officers as a 'probable' kill only, but German documents seized after the war confirmed U-365 had been destroyed with the loss of all 50 hands.

Although Wolfpack Stier lost two of their number they sank seven ships in addition to damaging *Cassandra*. Both Henley and Hutchinson were later awarded the Distinguished Service Cross. Bill's citation noted his *"gallant service, endurance and devotion to duty ... in Arctic seas while escorting convoys to and from north Russia"*. Throughout these harrowing months Bill's colleagues in *Campania* would remember his modesty, quiet charm and continued sense of humour.

Bill did not receive his DSC until on loan service in Australia. At Melbourne's Government House Investiture of





Top. This painting depicts the struggle of the so called Battle of the Atlantic, where German U-boats threatened to cut off Britain's life blood. Early convoys had periods without any allied air cover, but the increasing numbers of small Escort Carriers ensured organic air support, and with better tactics and technology, the balance of the battle swung towards the British. Centre. Bill Henley (circled) stands behind his Observer, "Chappers" Chapman. Bottom: Campania rolling in a heavy sea. The image shows how narrow the island structure on these escort carriers was - about 14 feet. (*IWM*). →

27 July 1949 the Lieutenant-Governor of Victoria presented the decoration. Bill was the sole naval recipient

27 July 1949 the Lieutenant-Governor of Victoria presented the decoration. Bill was the sole naval recipient amongst several dozen army and air force personnel accompanied by their respective senior officers. The attending Rear-Admiral John Collins CB RAN, gesturing to his dress uniform with sword and medals that the occasion obliged him to wear barked: "There's only one from the Navy here and he's a bloody Pom!"

Nicknamed 'Paddles' by his RAAF colleagues at No.1 FTS, Bill was remembered by Probationary Pilot Norman Lee (later Commodore Norman Lee) of No.2 NAP Course, as somewhat dour in front of his students and slightly at odds with his ground posting. Almost certainly Bill missed flying and had a signal sent from Australia volunteering for night fighter training on return to the UK. Selected for a permanent commission in 1949, and SNO at RAAF Point Cook for his final months of loan service, Bill reverted to the RN in May 1950 again flying Fireflies. Shortly afterwards he commenced an exchange posting to the US Marine Corps Air Station at Cherry Point, North Carolina.

Next posted to 809 Squadron at *Seahawk*/Naval Air Station Culdrose Bill flew the wooden twin-engined de-Havilland Sea Hornet NF21. A development of the wartime Mosquito, specialised in the night fighter and

st gura E¹! th of eib w si 8ⁱ n⁻ F vi



Above. A Swordfish carrying two depth charges launches from an Escort Carrier for an antisubmarine sweep. Unlike in this image, many such patrols were in the darkness of the long winter nights, in conditions so cold the crew had to be helped from the open cockpit on return. Left. On 3 April 1944 while patrolling in daylight ahead of Russian Convoy JW.58 a Swordfish from Activity found U-288 on the surface. The submarine decided to fight it out with the biplane. Under heavy AA fire the Swordfish called for assistance. Lieutenant-Commander Victor Smith RAN, Staff Officer (Air) in the nearby Tracker sent an Avenger and a Wildcat into the fray. The combined depth charge and rocket attacks sank U-288 south east of Bear Island.

strike role, this was a demanding type. It was also a singular looking aircraft with a needle nose to extend the radome past the interference from the large propellers.

Embarking on the 43,000 ton fleet carrier *Eagle* for the 1953 Spring Cruise the squadron lost two aircraft and three crew in a mid-air collision at 1500 feet 40 nm east of Gibraltar on 11 March while doing a flypast for General Tito of Yugoslavia. One pilot managed to bale out but his parachute became entangled in the tail plane, while an Aircraftsman in the second aircraft parachuted safely and was recovered unhurt.

809 Squadron disembarked to contribute nine Sea Hornets for Queen Elizabeth's Coronation Fleet Review Flypast of 15 June 1953. The previous Coronation Review, King George VI's on 20 May 1937 that Princess Elizabeth had attended, was centred on eleven battleships and battlecruisers. There had also been four aircraft carriers, all four having being constructed on converted hulls. Her Majesty's Coronation Review sixteen years later saw but a single battleship in the review lines. *Vanguard* had seen no war service and her second-hand 15 inch guns had come from the Admiralty Armament Reserve, where they had sat since being removed from the battlecruisers *Courageous* and *Glorious* when they acquired flat tops in the 1920s.

A never-to-be-repeated 327 naval aircraft from 36 squadrons (including 817 Firefly Squadron off *Sydney*)

participated in the Flypast. They overflew nine built for purpose fleet and light fleet carriers of the RN, RAN and RCN. The navy's fundamental shift towards air power occasioned by six years of World War, and the ongoing conflict in Korea where three carriers were in theatre, could not have been clearer.

Promoted in September 1953, Bill was back aboard Eagle with 809 when the unremittingly hazardous nature of flight deck operations was highlighted by tragedy. In October a Leading Air Mechanic walked into the spinning port propeller of Bill's Hornet and was killed.

Lieutenant-Commander Henley took over command of 809 Squadron in January 1954. He re-embarked the squadron in Eagle, taking passage to Gibraltar for exercises before returning to Culdrose in March, where the squadron disbanded that May.

Following jet conversion Bill reformed and commanded 893 Squadron at Heron/Naval Air Station Yeovilton on 6 February 1956. An all-weather fighter squadron equipped with six Sea Venom FAW.21s the increasingly unsettled Suez situation, following the nationalization of the Suez Canal, saw the squadron expanded to nine aircraft in June. This was achieved by absorbing 890 Squadron's remaining four aircraft, that squadron having lost two aircraft with both crews, including their CO, over five days working up with the training carrier Bulwark. The expanded squadron was assigned to Eagle's Carrier Air Group.

Bill had planned to marry Hazel Wright on 17 August in London, but the nuptials were postponed when his squadron hurriedly deployed to Falcon/Naval Air Base Hal Far at Malta on 10 August. Replacing Eagle's Gan-

Below. The De Havilland Sea Hornet NF21 that Bill Henley flew was a derivative of the famous Mosquito. Adapted for seaborne night fighting, the aircraft had an extended 'beak' to project the radome clear of the large propellers, which also necessitated long, spindly undercarriage legs ill-suited to deck operations. It was, however, a joy to fly with celebrated test pilot Eric 'Winkle' Brown remarking. "...for sheer exhilarating flying enjoyment, no aircraft has ever made a deeper

net squadron, 893 embarked on 18 August. Finally marrying in Gibraltar, Bill was on honeymoon in Spain when the Suez became a Crisis and he was recalled. Hiring a car at great expense, he rushed back to Gibraltar to find the carrier had sailed, but an aircraft had been left behind at RAF Base North Front for him. He took off from the Rock and soon caught up with Eagle as her Task Group steamed towards Egypt and Operation Musketeer.

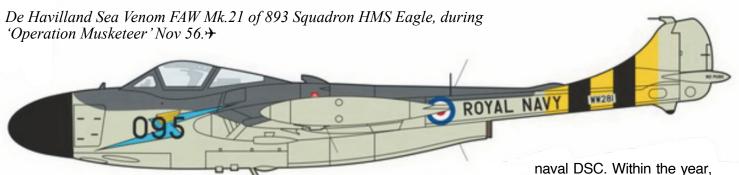
The opening attack by the Royal Air Force Valiants and Canberras from Malta and Cyprus faced difficulties because the war was planned to start on a weekend. The Officer Commanding Malta Bomber Wing received a signal from Bomber Command to prepare for a night raid on Saturday 31 October. The Air Officer Commanding Malta came under Middle East Command, who had given him no orders, so he refused permission to open the bomb dumps.

No-one in authority back in the UK could be contacted to resolve the issue as it was a Saturday and Air Headguarters was closed. In despair the OC Bomber Wing ordered the gates of the bomb dump broken down. Unfortunately the seven Canberra bombers in the first raid mistook Cairo International airport for the Egyptian Air Force Base Almaza, but fortunately their forty-one 1000 Ib bombs missed anything important. Following RAF raids found the correct airfields.

Bill's squadron was part of the five carrier Anglo-French strike group that was tasked for low-level attacks against Egyptian airfields, gun positions and ground forces. Launching at 05:20 1 November Bill was Strike Leader with Lieutenant Ian Gilman as his Observer. After they had formed up in the dark Bill led four Sea Venoms of 893 and 892 Squadrons with twelve Sea Hawks of 897 and 899 Squadrons in a dawn strafing attack against EAF Base Inchas. That day the five attack squadrons from Eagle alone claimed thirty-two aircraft destroyed, six probables and fifteen damaged.

Next morning 893 flew a dawn Combat Air Patrol over the carrier before Bill launched at 10:35, leading five





Sea Venoms against EAF Base Bilbeis. Returning he paid a passing call on Inchas where a further MiG was destroyed. That afternoon Bill launched at 14:50 leading eight Sea Venoms of 893 and 892 against Almaza. On this strike Lieutenant-Commander John Wilcox, Bill's Senior Pilot, received a flak burst which damaged the hydraulics and severely injured his Observer, Flying Officer Robert 'Bob' Olding.

While Bob applied a tourniquet to his leg and self-injected morphine John, with no hydraulic assistance to the controls, flew back to the carrier in manual reversion. A wheels up flapless approach was made to Eagle. Luckily the arrester hook dropped with the hydraulic failure as designed and gave a green light. Bill later recounted that: "Bob, despite his wounds, continued to call out the airspeeds during the approach in the usual way, but passed out on landing". After treatment in Eagle's sickbay Bob was flown ashore to Cyprus where his leg was amputated above the knee.

Eagle claimed eighteen aircraft destroyed and seventeen damaged on this second day of strikes. Combined with the other carriers successes, and the RAF attacks, the EAF was now effectively destroyed and air superiority was a given over the battle zone. Strikes continued on 3 November, 893 conducting a midday strike against Almaza with Bill leading a dusk strike of four against EAF Base Cairo West.

The carriers withdrew for replenishment on 4 November, and on the 5 November the airborne assaults by paratroops went in at Port Said and Gamil airfield. While a section of 892 Sea Venoms flew flak suppression for the troop carriers over the Drop Zone Bill again led eight Sea Venoms against Almaza which he noted: "seemed to have more 30mm flak than all the rest put together!"

With the dawn seaborne assaults of 6 November flying was now predominantly cab-rank duty by all squadrons, with up to twelve aircraft at a time in the airborne stack. waiting for forward air controllers to call in strikes as needed to support the troops. But 893 was not quite finished with Almaza. That afternoon a four aircraft strike went in once more against Almaza's flak, reporting four aircraft destroyed, and before dusk an armed reconnaissance of Cairo International and Almaza was flown. When no aircraft were seen at Almaza all rockets were expended on hangars.

At midnight a US brokered ceasefire came into effect. Bill was awarded his second Distinguished Service Cross: 'In recognition of gallant and distinguished services in the Near East, October - November 1956'. Bob, even though he was RAF, was also decorated with the

having mastered an artificial leg, he was Navigating in Javelin Night Fighters and retired as a Group Čaptain in 1984.

In December there was a need to rebuild operational strength back to nine aircraft after Operation Musketeer. Once again a second squadron, this time 892, was formally absorbed into 893 under Bill's obviously well recognized leadership. He was reunited with Hazel, who had sailed from Gibraltar with a Royal Fleet Auxiliary ship, in Malta on Boxing Day.

Bill's aviators luck held on 14 February 1957 when his port wheel went over the deck edge on a night landing run. And held yet again on 7 March 1958 when flying with Squadron Leader A Brown RCAF in a Sea Balliol from the School of Land/Air Warfare at Old Sarum. The aircraft suffered an engine failure and was a total loss in the subsequent forced landing at RAF Acklington.

Further postings included Ark Royal's Air Department



A US Newspaper reports on the Suez Crisis. Britain, France and Israel conspired to invade Egypt, primarily to seize control of the Suez Canal and to remove President Gamal Abdel Nasser from power. America was instrumental in compelling the British to cease hostilities before they could achieve their military objectives. The result was the humiliation of the United Kingdom and the fall of the Prime Minister, Anthony Eden.



as a Lieutenant-Commander (Flying), and work with a beach survey team around Aden and Africa. These latter duties fostered a deep interest in geography. Bill's final posting was back to the School of Land/Air Warfare before leaving the Royal Navy in 1968, twentyseven years after joining as a teenage air-raid warden.

Keen to continue flying Bill joined Loganair (which he called "Teeny-weeny airlines") after seeing a magazine advert. Almost entirely ex-RN or RAF there was a natural friendly rivalry between the two. He enjoyed the challenge of landing on rough airfields just cleared of sheep, and spent fifteen years flying to the Highlands and Western Isles based in Glasgow. Mainly operating Britten Norman Islanders he flew a Beechcraft 18 for larger loads and, with a clear nosecone, for the annual West Coast seal count.

Bill made many friends in the isolated communities such as Barra, where he pioneered the only beach airport in the world used for scheduled air services. A woman in a hut would wave a flag when the tide had receded enough to make it safe to land on the sand. He also piloted fixed-wing air ambulances, with a baby being delivered onboard by a nun at 7500' over Mull. Flying newspapers into Stornoway he claimed to be the "best-paid paperboy in the business". Bill retired as Loganair's Senior Pilot in 1983. Sea Venom of Henley's 893 Squadron. Damaged by AA fire over Almaza which caused hydraulic failure and prevented the undercarriage being lowered. Normally this would be cause for an ejection rather than ship-board recovery but the Observer, Flying Officer Olding, had been seriously wounded during the attack. \rightarrow

During long hours of standby for air ambulance flights Bill earned an Open University degree in Geography and Geology. This was followed by evening classes in Russian and then Chinese which he put to use on international visits including five trips to China. Bill became a member of the Royal Scottish Geographical Society and was chairman of its Glasgow branch. He also supported and raised funds for King George's Fund for sailors, now known as Seafarers UK.

In his later years Bill Henley, wearing his medals and Arctic white beret, would return to Loch Ewe, where those vulnerable merchant ships had assembled in 1944-45, for reunions of the Russian Convoy Club. Bill died in 2011 before the Arctic Star was issued. Approved by the Queen in late 2012 the award was for those who had served seven decades before, undertaking what has often been described as "the worst journey in the world." \rightarrow **Right.** Bill Henley in his latter years when, wearing his medals and Arctic beret, he would gather with other Russian convoy veterans in the hills above Loch Ewe where the convoys had been assembled forty years earlier.

Below. A stricken merchantman wallows in heavy seas. Convoy PQ.17 lost a devastating 60% of those who set out. Merchant losses overall on Arctic Convoys were 6%, double that of any other convoy route. \Rightarrow

