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“Just like a Training Exercise”

The Destruction of *U-198* in the Indian Ocean

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Introduction 1[1]

The operation described here began on 5 August 1944 , when the merchant ship SS *Empire City* was sunk in the northern entrance of the Mozambique Channel , and ended with the destruction of the German U-boat, *U-198*. Altogether, two Royal Navy escort carriers (each with a Fleet Air Arm squadron embarked), nine frigates and sloops of the Royal Navy and Royal Indian Navy and aircraft of 246 Wing Royal Air Force, who flew nearly 900 hours, were involved in the operation. These events have largely been ignored by subsequent historians, though just after the action, the Admiralty thought that it ‘...must rank amongst the finest of the Anti-U-Boat campaign.’^{2[2]} Events, such as the one depicted here, are unlikely to be repeated in modern operations. But this historical narrative does illustrate the crucial role played by dedicated and enthusiastic individuals, mainly professional naval officers with considerable operational experience. As the narrative shows, these men were able to piece together, from fragmentary intelligence,

1[1] The times used in this narrative are local times (GMT – 4).

2[2] Minute, Captain C.D. Howard-Johnston, DAUD, 28 September 1944 , ADM 199/498.

the likely course of the U-boat and concentrate adequate forces against her. Special Intelligence, of which the men at sea had no knowledge, played only a marginal role in the operation, instead it was the application of more conventional forms which proved valuable. Ultimately, the enemy was located by a visual sighting. Tactical mistakes probably led to the U-boat escaping destruction for another 48 hours but, eventually, success was achieved through persistent searching, based on remarkably prescient assessments of the most likely U-boat positions. This would not have been enough had it not been buttressed by the intense training imposed by the senior officers present.

U-198's Second War Patrol

In late April 1944 the Type IXD2 U-boat, *U-198* set out from the Biscay port of La Pallice on her second war patrol, bound for the Indian Ocean under her new 24-year old captain, Oberleutnant zur See Burkhard Heusinger von Waldegg.^{3[3]} By mid-June she was in the South Atlantic, where Waldegg sank the SS *Columbine*.^{4[4]} On 5-6 July she was sighted to the east of Durban firstly by a South African Air Force Catalina which attacked, but herself was hit by flak from the U-boat. The U-boat appeared to be undamaged. Some 20 hours later, another SAAF aircraft, a Ventura again sighted *U-198* and attacked, this time as the U-boat submerged. Four dinghies came to the surface, followed by a steadily increasing patch of oil, and finally some air bubbles and two more dinghies.^{5[5]} Initially, it was hoped by the British that the attack had been lethal and it

^{3[3]} *U-198* had completed an earlier sortie into the Indian Ocean during which 7 ships were sunk. Rainer Busch and Hans-Joachim Röhl, *German U-boat Commanders of World War II: A Biographical Dictionary* (London: Greenhill Books, 1999); Axel Niestlé, *German U-boat Losses during World War II: Details of Destruction* (London: Greenhill, 1998); Peter Sharpe, *U-boat Fact File, Detailed Service Histories of the Submarines Operated by the Kriegsmarine, 1935-1945* (Leicester: Midland Publishing, 1998).

^{4[4]} 'Naval Headlines, No. 1097,' Naval Section, 5 July 1944, HW 1/3034.

^{5[5]} 'Précis of Attacks by Catalina Aircraft "L" of 262 Squadron and Ventura Aircraft "B" of 23 Squadron,' in, 'Assessment Committee Serial No. 102. Reference: AUD

was not until well after the U-boat had been destroyed, that the Admiralty's U-Boat Assessment Committee concluded, with the help of the subsequent events, that the encounter had resulted in the U-boat probably being slightly damaged.^{6[6]}

As Waldegg moved *U-198* up the African coast, he encountered *SS Director* on 15 July sailing independently (because the shore authorities assumed there was no threat).

Waldegg sank her with a single torpedo and, having surfaced amongst the survivors, may have taken the ship's Senior Radio Officer prisoner. Four days later Waldegg ran across what he assessed to be a large freighter. *U-198* attacked but missed, and was then subjected to a heavy counter-attack because the freighter was actually part of Convoy CM 56. The anti-submarine (A/S) forces then maintained a search with 9 escorts supported by shore-based aircraft.^{7[7]} *U-198*, however, escaped detection. Then on 5 August she attacked a Liberty ship but Waldegg's acoustic homing torpedo malfunctioned and circled back towards the U-boat, exploding close to the boat and causing slight damage.^{8[8]} It seems that for the third time, Waldegg was lucky to escape with only minor damage.

The Sinking of *SS Empire City*

U-198 continued her passage northwards, passing between Madagascar and the African coast and at 0115 on Sunday 6 August 1944 spotted *SS Empire City*. She was carrying coal from Lourenço Marques to Aden and steaming independently in a northerly

.1361/44,' from, 'Proceedings of U-Boat Assessment Committee, July–September 1944,' Vol. 16, Naval Historical Branch.

6[6] 'U-boat Situation, Week ending 7 August 1944,' Lieutenant Commander P. Beesly, RNVR, OIC 8S, OIC/SI.1033, 7 August 1944, ADM 223/172.

7[7] 'Thursday, 20 July 1944, War Diary (Naval), 16-30 July 1944,' Naval Historical Branch, pp. 442-443; 'Report of an Interview with the Master, Captain W. Weatherall [*SS Director*],' Shipping Casualties Section – Trade Division, TD.139/2116, 21 September 1944, in, 'ADM 199/2147, 1 January – 31 December 1944, File 2,' NHB.

8[8] '6 August 1944,' in, 'Translation of PG/30352, BdU's War Log, 1-15 August 1944,' NHB.

direction at 11 knots when the first torpedo struck her amidships. Her engine room quickly filled with water and the ship took on a heavy list. Her Master, Captain B.H. Jackson, immediately ordered a distress message to be sent, but because the explosion had damaged most of the radio gear, only the emergency set was working. Jackson was unable to confirm that the message had been received ashore as none of the ship's receivers were working. He wasted no more time but ordered the crew to abandon ship. Everyone got away, apart from two men who had been killed in the engine room when the torpedo struck. About 20 minutes later, as the crew pulled away from the stricken ship, a second torpedo struck her and she quickly settled. The U-boat then surfaced amidst the lifeboats and asked the survivors various questions. She then was seen '...clearing off to the eastward.'⁹[9] The lifeboats eventually made landfall in Portuguese East Africa on the following day.

Only a partial emergency message was received ashore, for the signal faded before any position could be received. However, from their Merchant Shipping Plot Flag Officer, East Africa (FOEA) was able to calculate that this was *Empire City* and that her position had been at the northern end of the Mozambique Channel. On the following morning, a Catalina of 246 Wing RAF was despatched to search the area, and sighted wreckage and the lifeboats.¹⁰[10] FOEA sailed HM Ships *Jasmine* and *Falmouth* to assist the survivors and to search for the culprit. More importantly, the A/S carrier support group, Force 66, was allocated to FOEA by Commander-in-Chief, Eastern Fleet (C-in-C, EF) on the evening of 6 August to carry out a more extensive search. As these forces were mobilised

⁹[9] 'Report of the Master, B.H. Jackson, on the Loss of the MV *Empire City*, 6 August 1944,' B.H. Jackson, Master, 13 August 1944, in, 'ADM 199/2147, 1 January – 31 December 1944, File 2,' Naval Historical Branch; '6 August 1944,' in, 'Translation of PG/30352, BdU's War Log, 1-15 August 1944,' Naval Historical Branch.

¹⁰[10] 'Indian Ocean, 24 November 1942 – May 1945,' NHB, p. 199; Message, FOEA to C-in-C, EF, 060852Z/August, 6 August 1944, in, 'Indian Ocean, 24 November 1942 – May 1945,' NHB, p. 199; 'Report of Air Action by 246 Wing during U-boat Hunt from 6-14 August 1944,' Group Captain C. Broughton, Officer Commanding No. 246 Wing, RAF, 23 August 1944, ADM 199/498.

U-198 sent a W/T message to *Befehlshaber der Unterseeboote* (BdU), the U-boat High Command.¹¹[11] This signal was intercepted by British HF/DF stations (passed to Bletchley Park) and a fix obtained, which was assessed and passed by C-in-C, EF to the forces at sea during the early afternoon of 7 August. It fixed the U-boat to a position within 150 miles about 180 miles to the north of the sinking of *Empire City*.¹²[12] The HF/DF fix gave relatively little information, for FOEA had already assessed that the U-boat would be making to the north, and had signalled this assessment to the forces at sea. That evening, 7 August, *U-198* found and sank SS *Empire Day*, though this ship was unable to get any distress message off and her fate was not realised until 11 August when survivors arrived ashore, and so, no update of the U-boat's position was obtained either. Nor was it realised, until later, that the ship's Chief Officer had been taken onboard the U-boat.¹³[13]

About 36 hours after the HF/DF fix, Bletchley Park succeeded in revealing the contents of the message, though this only confirmed that the U-boat was *U-198* and that she had been responsible for sinking the *Director* and *Empire City*. There is, however, no direct trail for the contents of this decrypt being passed to C-in-C, EF, or FOEA, though, presumably, it was.¹⁴[14] Had the U-boat then remained silent, the Admiralty thought

11[11] '6 August 1944,' in, 'Translation of PG/30352, BdU's War Log, 1-15 August 1944,' NHB.

12[12] 'Sinking of German Submarine on 12 August 1944 ,' Rear Admiral R. Shelley, Flag Officer, East Africa , EA.0951/S, 22 August 1944 , ADM 199/498.

13[13] 'Report of an Interview with the Master, Captain C.G. Mallett [MV *Empire Day*],' Shipping Casualties Section – Trade Division, TD.139/2114, 21 September 1944 , in, ' ADM 199/2147, 1 January – 31 December 1944 , File 2,' NHB.

14[14] ZTPGU/29209, TOO 0212, TOI 0117/7/8/44, 1047/8/8/44 EGT, DEFE 3/734. See also, 'U-boat Situation, Week ending 7 August 1944 ,' Lieutenant Commander P. Beesly, RNVR, OIC 8S, OIC/SI.1033, 7 August 1944 , ADM 223/172. Bletchley anticipated a second part of the message, which was not intercepted. Nor was it received by BdU. '6 August 1944,' in, 'Translation of PG/30352, BdU's War Log, 1-15 August 1944,' NHB.

that *U-198* ‘...might have thrown out the hunt considerably.’¹⁵[15] But, as the A/S forces began their concentration from positions over 1,500 miles away and 246 Wing aircraft searched the oceans, the U-boat sent another signal. This, too, was D/F’d on the evening of 8 August, placing *U-198* over a hundred miles further to the east, but with a fix error of 200 miles. However, as Acting Captain John “Jackie” Broome, DSC, RN, commanding Force 66, remarked,

...it must be unsound to gauge direction entirely from HF/DF circles of 150 and 200 miles diameter, my lasting impression was that he was not going north at that moment, but that he was either standing out to avoid air patrols from the Kilindini area, or was heading east.¹⁶[16]

Yet the wireless intelligence was only able to provide a rough indication of the U-boat’s movements and had to be fused together with healthy commonsensical military judgement. When this second U-boat signal was decrypted some 48 hours later it added very little to the planning assumptions which the A/S forces were now using.¹⁷[17]

Enter Force 66 and the Hunt Begins

Force 66 consisted of the escort carriers HMS *Begum* (Acting Captain Broome) with 832 Squadron embarked, and HMS *Shah* (Acting Captain William Yendell) with 851 Squadron embarked. Each squadron consisted of 12 Avenger anti-submarine (A/S) aircraft and 4 Wildcat fighters. The Senior Officer (SO) of Force 66 was Broome in *Begum*. He was a qualified submariner, experienced escort group leader and had commanded the close destroyer escort for the ill-fated Arctic Convoy PQ17. The two carriers were supported by the 60th Escort Group (EG60), consisting of four River-class frigates (HM Ships *Taff*, *Findhorn*, *Parrett* and *Nadder*) and two sloops (HM Indian

¹⁵[15] ‘A Model Anti-U-Boat Operation in the Indian Ocean – 5-14 August 1944,’ Section 6, ‘Monthly Anti-Submarine Report, August 1944,’ DAUD, CB 04050/44(8), 15 September 1944 , NHB.

¹⁶[16] ‘Report of Proceedings – Force 66, Section 1, Narrative,’ [Captain J.E. Broome, RN], HMS *Begum*, 18 August 1944 , ADM 199/498.

¹⁷[17] ZIP/ZTPGU/29259, 1957/8/8/44, 1510/9/8/44 EGT, DEFE 3/734.

Ships *Cauvery* and *Godavari*). The SO, Commander Gerald Ormsby, DSO, DSC, RN, in *Taff*, was a qualified A/S officer and experienced escort group commander who had already destroyed *U-386* and *U-406* in the Atlantic . EG60 acted both as an escort for the carriers and an offensive A/S striking force to deal with any U-boats detected. The naval force was to be supported by Catalina aircraft of 246 Wing RAF.18[18]

So, on 10 August 1944, Force 66, was steering westwards with *Godavari* and *Cauvery* as a close screen and, from left to right, the frigates *Findhorn*, *Taff*, *Nadder* and *Parrett* disposed 7 miles ahead as an advanced screen and striking force, with the ships 10 miles apart.19[19] At first light *Shah*, the “duty” carrier, flew off Avengers to carry out ‘...a “Creeping Adder” patrol, that is a continual search by two aircraft [50 miles ahead] and out to 50 miles on each beam, back to the MLA, and so on, gradually advancing ahead.’20[20] One of the aircraft stalled on take-off and crashed into the sea, though the three crew were rescued by HMIS *Cauvery*.21[21] Nevertheless, at 1355 an Avenger piloted by the CO 851 Squadron, Lieutenant Commander (A) Anthony Tuke, DSC, RN, spotted a U-boat on the surface bearing 306° at 65 miles from the carriers. Tuke reported the U-boat as steering 070° at 12 knots but was unable to confirm the U-boat type, for the sighting was mutual and the enemy was already crash diving. Tuke turned towards and dived from 1,200 feet to 30 feet, arriving over the swirl left by the diving U-boat about 40 seconds after the enemy had disappeared. This was too late for an accurate attack, but worse still, the two depth-charges failed to release and Tuke was forced to go round

18[18] For some anecdotal material, not entirely accurate, see: Arthur Banks, *Wings of the Dawning: The Battle for the Indian Ocean, 1939-1945* (Malvern Wells: Images, 1996).

19[19] ‘Report of Proceedings for Period 30 July – 17 August 1944,’ Commander G.A.G. Ormsby, RN, Senior Officer 60th Escort Group, HMS *Taff*, STA/B/19, 17 August 1944, ADM 199/498.

20[20] ‘Report of Proceedings – Force 66, Section 1, Narrative,’ [Captain J.E. Broome, RN], HMS *Begum*, 18 August 1944 , ADM 199/498.

21[21] [Report of Proceedings], Captain W.J. Yendell, HMS *Shah*, No. 2014/1, 16 August 1944 , ADM 199/498.

again. He aimed at a position estimated about 800 yards ahead of the swirl, but, not surprisingly, no results were observed.²²[22]

As soon as he received Tuke's report, Ormsby took the advanced screen on to full speed to close the scene of action. By using the HF/DF gear in the frigates, Ormsby was able to accurately fix the relative position of the Avenger, which greatly helped the homing. An hour later, Ormsby was able to detect the Avenger's IFF responses. In earlier practices, he had discovered that the most accurate way to fix the aircraft was to use the IFF responses to establish range and the aircraft's transmissions to provide D/F bearings. This method was used to plot the U-boat's diving position relative to the ships each time the aircraft passed overhead of his smoke-marker. The starboard wing ships had had a starting advantage due to their position closer to the Avenger. By 1615 *Nadder*, '...the greyhound of the team...' had already caught up with *Parrett*, while *Taff* was still 5 miles astern and *Findhorn*, '...whose engines were shaky,' some 8 miles behind *Taff*. As the ships drew closer, the final homing was done using the "Chase-me-Charlie" method in which the aircraft flew up the bearing from the escorts to the marker and transmitting as she passed over the marker, when the escorts took a snap IFF range and HF/DF bearing.²³[23]

Ormsby's assessment at this stage was that the sighting by the Avenger, in relation to the D/F fixes, confirmed that the enemy was making progress to the north-east. Ormsby also thought that, as the escorts were so far away from the U-boat's diving position, the enemy would have no idea of their direction of approach, and might even be completely unaware that a surface A/S force was in his vicinity. He concluded that the U-boat, having now dived, was most likely to continue on his north-easterly track, though, as '...a second bet, he might head upwind hoping that the drift of the aircraft's surface markers would take the hunt to leeward of him.'²⁴[24] As a result of this appreciation,

²²[22] Enclosure No. 1 to *Shah* letter No. 2014/1, 16 August 1944, ADM 199/498.

²³[23] 'Report of Proceedings for Period 30 July – 17 August 1944,' Commander G.A.G. Ormsby, RN, Senior Officer 60th Escort Group, HMS *Taff*, STA/B/19, 17 August 1944, ADM 199/498.

²⁴[24] *ibid.*

Ormsby instructed *Parrett* and *Nadder*, the first ships to arrive at the datum, initially to sweep through the diving position and continue to the north-west before starting a clockwise Vignot Search on reaching the U-boat's furthest-on circle.^{25[25]} They would, therefore, cover the U-boat's most likely escape route. Had *Findhorn* not been so far astern, Ormsby would have preferred to have formed her on *Taff*, and then use this pair to carry out a separate search of the next most likely escape course upwind of the diving position. This sector had, to some extent, been covered by the escorts' approach to the diving position. However, none of the ships got the faintest whiff of a contact. As the Director of Air Warfare and Flying Training in the Admiralty later pointed out: This was a case where the use of sonobuoys would probably have enabled the aircraft to put the surface vessels in contact and saved the Asdic hunt that was necessary.^{26[26]}

As it was, with only two hours of daylight left, Ormsby thought it best to take *Taff* to join *Parrett* and *Nadder*, with *Findhorn* joining the search as she came up. She was routed inside the Vignot plan, so as to cover the water in which the U-boat might be if it was travelling slower than Ormsby anticipated. He also realised that concentrating the '...Escorts...at this stage would also facilitate the rapid organisation of a Radar search at the onset of darkness.'^{27[27]} All four frigates were together by 1900, having reached a point north-east of the diving position. Forty-five minutes later, as darkness fell, Ormsby spread the ships into a line-abreast formation 6 miles apart (that is, at twice radar detection distance), starting at a point roughly east of the U-boat's diving position. By now, too, *Godavari* and *Cauvery* had also been released by Broome to join the search (with the carriers relying on darkness and remaining outside the U-boat's submerged

^{25[25]} The Vignot Curve consisted of a spiral search which intercepted the expanding furthest-on positions of the U-boat. It was typical of the philosophy applied to USN "retiring" search plans.

^{26[26]} Minute, Captain J.P. Wright, Director of Air Warfare and Flying Training, 28 October 1944 , ADM 199/498.

^{27[27]} 'Report of Proceedings for Period 30 July – 17 August 1944,' Commander G.A.G. Ormsby, RN, Senior Officer 60th Escort Group, HMS *Taff*, STA/B/19, 17 August 1944, ADM 199/498.

furthest-on circles to shield them from harm). Ormsby arranged for the two sloops to further search ‘...any holiday left in the north-east sector.’^{28[28]}

In darkness, the four frigates continued the Vignot search relying on radar to catch the U-boat should it decide to make a break on the surface. The track took the ships in a wide cast upwind of the diving position, with Ormsby intending to continue the plan to cover the south-western sector, aiming to be to the west of the datum by dawn. From here he would make a sweep through the original diving position in an easterly direction at high speed towards the light horizon. The sloops, meanwhile, were to rendezvous with the carriers at 0600 on 11 August. However, this plan was, in large measure, disrupted by events, for at 0211, *Taff* intercepted a contact report from the Catalina “T” of 209 Squadron which reported a radar contact. There was some confusion over the position of this report but was eventually resolved by Broome in *Begum* as being 355°, 45 miles from the diving position. Broome was convinced that this was the U-boat and the direction of the frigates’ search was altered to intercept this contact. For the rest of the night Ormsby’s ships chased shadows and were never able to correlate the positions given by the T/209, or its reliefs. The position reported appeared to be some 25-30 miles too far to the north, probably due to navigational errors by T/209. This confusion was amplified by the inability of the RAF aircraft and Ormsby’s ships to establish reliable communications with each other. As dawn approached, an irritated Ormsby noted, ‘...the situation had by this time become most obscure, to say the least, as we had on our Plot no less than five positions in which the... ASV [radar] contacts might have been....’ This included discrepancies between the plots in *Taff* and *Begum*.^{29[29]}

^{28[28]} *ibid.*

^{29[29]} ‘Report of Air Action by 246 Wing during U-boat Hunt from 6-14 August 1944,’ Group Captain C. Broughton, Officer Commanding No. 246 Wing, RAF, 23 August 1944, ADM 199/498; ‘Report of Proceedings – Force 66, Section 1, Narrative,’ [Captain J.E. Broome, RN], HMS *Begum*, 18 August 1944, ADM 199/498; ‘Report of Proceedings for Period 30 July – 17 August 1944,’ Commander G.A.G. Ormsby, RN, Senior Officer 60th Escort Group, HMS *Taff*, STA/B/19, 17 August 1944, ADM 199/498.

By 1315 Broome had also concluded that the escorts ‘...were pursuing a tale and by this time extremely doubtful scent...’ and therefore recalled the force. He had become convinced that the U-boat had made off in a north-north-easterly direction and intended, therefore, to sweep up the U-boat’s most probable track with air searches from both carriers to re-establish contact. Indeed, Broome upon consideration thought that he had ...made a mistake which probably lost us the U-boat and taught me a lesson. Putting myself in the position of a U-boat captain sighting a single carrier-borne aircraft in the early afternoon, I would unquestionably dive and use speed to get as far away as possible from the “marked spot” before dark, with no risk of having to look occasionally for approaching surface craft. With this course of action so obvious for the enemy, I should have instructed EG60 to form a fence around the U-boat’s diving position to catch him on the surface by Radar after dark, instead of wasting valuable time sweeping with Asdics through and about such a stale diving position.³⁰[30]

By 1800 that day, Ormsby’s frigates were in their accustomed position 10 miles ahead of the carriers and spaced about 7 miles apart, with the two sloops once more providing the carriers close escort. Force 66 was steering 060° and Broome ordered the advanced screen to open out by dawn on 12 August. On the evening of 11 August Broome, himself a qualified submariner, thought the situation ‘...was delightful...’ because he believed that ‘Force 66 was behind the U-boat and his direction of progress was more or less a certainty.’ This, Broome believed, was the best position from which to stalk a U-boat, for no conning-tower ‘...lends itself to after lookouts...and many are the times I have been surprised in peace time exercises from “behind the ears” in submarines on the surface.’ He also suspected that the U-boat’s crew might be more relaxed at first light on the morrow, for while the ...stimulation of the *Empire City* sinking had probably worn off, and had possibly been replaced by irritation when they were sighted by a carrier-borne aircraft. After a tense 36

³⁰[30] ‘Report of Proceedings – Force 66, Section 1, Narrative,’ [Captain J.E. Broome, RN], HMS *Begum*, 18 August 1944 , ADM 199/498.

hours, therefore, they felt their troubles were behind them, and a wide and peaceful ocean lay ahead, with the delicious Japanese luxuries... waiting for them at Penang .31[31] Thus, Broome's intention was to station Force 66's carriers about 50 miles astern of the U-boat. The frigates, he planned to have 25 miles ahead of the carriers ready to react to intensive air searches at first light.

“A Sighting is a Sinking”

The Force's slogan was “a sighting is a sinking” and the hunt was now on in earnest. In the early hours of 12 August 1944 , *Shah* launched 6 Avengers from 851 Squadron to sweep an area out to 140 miles ahead of the carriers and 65 miles either side of the MLA. Acting Lieutenant Commander (A) Anthony Tuke, DSC, RN, Commanding Officer of the Squadron was the pilot of the aircraft second from the left of the anti-U-boat sweep. He was flying at the base of the six-tenths cloud cover at 1,000 feet, when at 0652, about 20 minutes before first light, *U-198* was spotted about 20° right of the nose of the aircraft. She was fully surfaced and travelling at high speed on a course of 020°. Tuke immediately climbed into the cloud, hoping to delay the U-boat sighting the aircraft for as long as possible. But, as the Avenger broke cloud and heading into the rising sun, it was immediately apparent that they had been spotted, for *U-198* was diving. Nevertheless, Tuke was close enough to make an attack while the U-boat's periscope was still visible from just abaft her port beam. The result was a perfect straddle with the two depth-charges carried exploding either side of the conning-tower, which was clearly seen below the surface as the aircraft passed overhead at 180 knots and a height of 30 feet.32[32] It was, perhaps, unfortunate that the Avengers were only carrying two depth-charges because as *Shah's* report later made clear:

All aircraft carried full petrol load, full gun load, 2 markers marine, and 2 depth-bombs. With the wind obtaining at dawn it would have been possible to have carried a load of 4 depth-bombs. The load, however, had to be decided before dark on the previous night. This was necessary because it is not feasible with American depth-bomb racks to bomb

31[31] *ibid.*

32[32] Enclosure No. 2 to *Shah* letter No. 2014/1, 16 August 1944 , ADM 199/498.

up or reduce the lead in the dark. Wind and sea conditions predicted the night before made 2 bombs the maximum load that would not have to be changed.³³[33] Nevertheless, Tuke's attack had been very accurate and about 30 seconds later the U-boat re-surfaced, stern first and at 90° to its original course. She remained stationary for 4 minutes with the stern underwater and the bow just clear of the surface. *U-198* then got underway but first turned a complete circle before zig-zagging on a rough heading of 020-040° at about 6-8 knots. The U-boat's crew then manned their A/A guns and opened fire on the Avenger, to which Tuke and his crew replied with the aircraft's forward-firing and turret guns. Although the fire was kept up for about 25 minutes, neither side seems to have scored any hits. Finally, at 0726 *U-198* submerged again heading 040° and for a few minutes travelling at speed just below the surface, until she finally disappeared from view. About 5 minutes later, the first of the other Avengers on the search arrived at the scene.³⁴[34] These were the Avengers that had been to the left of Tuke's aircraft, who had turned towards the action as soon as they heard Tuke's initial sighting report. The aircraft on the leg to the right of Tuke's search, however, failed to receive either Tuke's sighting report or the re-broadcast message made by *Shah*. This was unfortunate, for this aircraft was within easy distance of the damaged U-boat while she was still on the surface and could possibly have made a lethal attack. Both carriers scrambled additional strike aircraft but these too arrived too late to attack the U-boat.³⁵[35] Captain Broome later wrote that the failure to concentrate every aircraft at the scene of Tuke's attack was '...my second lesson.' He went on:

Though I had appreciated the point, and both carriers had tried it successfully with dummy "sightings", when this type of search was being rehearsed, I had not fully realised the importance of getting every airborne aircraft to the sighting at one, because these

³³[33] [Report of Proceedings], Captain W.J. Yendell, HMS *Shah*, No. 2014/1, 16 August 1944 , ADM 199/498.

³⁴[34] Enclosure No. 2 to *Shah* letter No. 2014/1, 16 August 1944 , ADM 199/498.

³⁵[35] [Report of Proceedings], Captain W.J. Yendell, HMS *Shah*, No. 2014/1, 16 August 1944 , ADM 199/498.

aircraft searching nearest to the sighting aircraft were by far the most effective strike after the search had reached 25 miles ahead of the carriers.³⁶[36]

The need to concentrate aircraft quickly was not a new lesson, for British escort carriers had for some time been less efficient at capitalising on sightings.³⁷[37] They had been fully persuaded that for surface A/S escorts to intervene effectively, they had to be about 25 miles from the scene, unless unrealistically large forces were employed.³⁸[38]

At 0700, Ormsby received Tuke's sighting report in *Taff*, which placed the U-boat 074°, 78 miles from the carriers. This put the position about 110°, 53 miles from the centre of the extended screen, and the four frigates immediately increased to full speed to close the position. At 0737 Ormsby learned from *Begum* that the U-boat had been attacked and probably damaged. Finding distant locations with the rudimentary navigations capability of the time was always problematic. The four frigates, stationed about 7 mile apart from left to right were *Parrett*, *Findhorn*, *Taff* and *Nadder*, raced towards the aircraft's position, homed by using HF/DF on its R/T reports, its IFF and, as the frigates drew closer, by the "Chase-me-Charlie" procedure. The co-operation with the Avenger, Ormsby noted, '...was again excellent and one felt that they could have homed us on to the proverbial needle.'³⁹[39] Approaching any U-boat by 1944 opened the escort to a counter-attack by the U-boat with an anti-escort acoustic homing torpedo (known as the Gnat). There were tactical remedies, but the most commonly used material counter was the "Foxyer" noise jammer towed astern of the A/S ships. In this case, Ormsby thought that: With the prospect ahead of a whole day party with a damaged and probably

³⁶[36] 'Report of Proceedings – Force 66, Section 1, Narrative,' [Captain J.E. Broome, RN], HMS *Begum*, 18 August 1944 , ADM 199/498.

³⁷[37] 'Achievements of British and US Escort Carriers,' DNOR, February 1944, ADM 219/95.

³⁸[38] M. Llewellyn-Jones, 'The Royal Navy on the Threshold of Modern Anti-Submarine Warfare, 1944-1949,' (PhD, King's College, *London* , 2004), p. 36.

³⁹[39] 'Report of Proceedings for Period 30 July – 17 August 1944,' Commander G.A.G. Ormsby, RN, Senior Officer 60th Escort Group, HMS *Taff*, STA/B/19, 17 August 1944, ADM 199/498.

vindictive U-boat, it was considered desirable to run Foxers and so the Escorts were ordered to stream them on reaching the “furthest towards” position.

Taff and *Nadder*, the fastest of the group reached the “furthest-towards” line first, streamed their Foxers and steamed straight on to carry out an asdic sweep through the U-boat’s diving position. From Ormsby’s perspective...all the evidence seemed to point to the fact that the U-boat would make in a generally North-east direction, even more strongly in this case, as it was reasonable to suppose that he would expect the Escorts to approach from the South-west or West. I also had in mind the idea that he might, as an immediate tactical measure, as soon as he heard the Escorts approaching, make off at right angles to their line of approach to place himself as far off-track and clear of the sweep as possible. In view of the fact that he was probably damaged and faced the prospect of a whole day submerged, it was unlikely that he would use high speed.⁴⁰[40] His immediate approach with *Taff* and *Nadder* intentionally passed somewhat to the south of the of the estimated most probable U-boat evasion direction, which was to the south-east, that is, at right-angles to his original track and up-wind.⁴¹[41] The other two escorts, *Findhorn* and *Parrett* arrived at the datum about half-an-hour later. Ormsby’s intentions were that on reaching the “furthest-on” position beyond the datum, for each pair of escorts ‘...to search in opposite directions on a Vignot Curve (allowing the U-boat a speed of 3 knots)...’⁴²[42] His idea was that, when the pairs of escorts reached positions roughly north and south of the original diving position, they were to turn inwards and sweep towards the centre ‘...to cover the possibility of the U-boat having made off at right-angles to the Escorts’ original approach.’⁴³[43] Meanwhile, *Cauvery*

40[40] *ibid.*

41[41] This was based on the principles of the “Beta” search. ‘Air and Surface A/S Searches and Striking Forces,’ Part 4, BR 1679(4) [formerly CB 4097(4)(44)], June 1944, Naval Historical Branch.

42[42] ‘Report of Proceedings for Period 30 July – 17 August 1944,’ Commander G.A.G. Ormsby, RN, Senior Officer 60th Escort Group, HMS *Taff*, STA/B/19, 17 August 1944, ADM 199/498.

43[43] *ibid.*

had again been detached from the carriers close escort and was given courses to steer by Ormsby which took her north of the diving position before turning northwards to join *Taff* and *Nadder*. As she approached from the west she dropped depth-charges to encourage the U-boat to make off eastwards and into the areas being searched by the other frigates.

***Godavari* Enters the Action**

At 1410 on 12 August 1944 , HM Ships *Falmouth* and *Genista* joined the two carriers and *Godavari* (Commander Anthony Goord, RIN) was immediately released to join the rest of EG60.44[44] Over the R/T, Ormsby instructed *Godavari* join the search scheme and to steer a course...to take her through the outer edge of the south-west sector, maintaining her speed, and dropping depth-charges as she went to further convince the U-boat that the westerly direction was unhealthy for him.45[45]

Ormsby was starting to feel pessimistic that the Group would catch the U-boat with the day Vignot search and had already announced his intentions for the Group to concentrate in the south-eastern sector by 1830 so that they would be in radar touch, making it easier for him to organise a night radar search by 1930 (when it would be fully dark). Ormsby with *Nadder* and *Cauvery* in company had already swept through the north-easterly and northerly sectors on the U-boat's furthest-on positions (calculated on an assumed speed of 3 knots), and at 1405 had turned back towards the datum before, at 1620, turning outwards once more to sweep the waters left uncovered by *Findhorn* and *Parrett's* sweep. The latter pair had covered the U-boats furthest-on positions to the east and south-east, and, somewhat later than planned, also turned inwards '...to cover the possibility of the U-boat having made off at right angles to the Escorts' original line of approach.' Ormsby, gloomily anticipating another night search,

44[44] Acting Commander A.B. Goord, RIN, had been in command since 10 May 1944 . *Navy List*, October 1944.

45[45] 'Report of Proceedings for Period 30 July – 17 August 1944,' Commander G.A.G. Ormsby, RN, Senior Officer 60th Escort Group, HMS *Taff*, STA/B/19, 17 August 1944, ADM 199/498.

was overjoyed at 1725 to receive ‘...the long awaited “Flag Queen Fishery Charlie” from *Godavari* , who had detected and confidently classified the U-boat.’ 46[46] *Godavari* had turned inwards to a course of 040° at 15 knots, as Ormsby had instructed, to close the U-boat’s diving position and cover the possibility of the U-boat evading at right-angles to the Escorts original approach. Soon after altering course, *Godavari* obtained an asdic contact 40° off her starboard bow at 1,300 yards. There was no doppler but the sharp echo was an ‘...unmistakable U-boat contact....’ 47[47] Goord immediately rang down for the engines to be stopped and the ship’s head was swung to point directly at the asdic contact, so that the contact’s bearing movement could be determined. The target’s range was now down to 600 yards and, with the bearing drawing right plus the lack of doppler, it was clear that the U-boat was heading in a south-easterly direction. 48[48] Goord’s desire was to attack immediately but, since there was no urgent need for a counter-attack, Ormsby’s policy was ‘...for the first dog to hold the quarry until the pack arrives....’ 49[49] Moreover, *Godavari* was only equipped with depth-charges, and not with either the depth-finding asdic Type 147B, or the Hedgehog ahead throwing weapon (ATW). This combination was likely to be the most deadly against a U-boat, especially if operating at depth. Ormsby’s policy was later codified by the Admiralty. 50[50]

46[46] ‘Report of Proceedings for Period 30 July – 17 August 1944,’ Commander G.A.G. Ormsby, RN, Senior Officer 60th Escort Group, HMS *Taff*, STA/B/19, 17 August 1944, ADM 199/498.

47[47] ‘Action against U-boat – 12 August 1944 ,’ [Commander Goord, RIN], HMIS *Godavari* , n.d., ADM 199/498.

48[48] ‘Report of A/S Operations [Asdic Log],’ HMIS *Godavari* , 12 August 1944 , ADM 199/498.

49[49] ‘Action against U-boat – 12 August 1944 ,’ [Commander Goord, RIN], HMIS *Godavari* , n.d., ADM 199/498.

50[50] ‘Use of Squid-Fitted Ships,’ Admiralty Message, CASO No. 8, DTG 271656Z April 1945, NAA(M): MP1185/8, 1932/3/45.

So, reluctantly, Goord settled down to hold the quarry, which had altered course to starboard before turning back again to a south-easterly heading. As *Godavari* swung round astern of the U-boat, its wake tended to mask the asdic echo which became blurred.⁵¹[51] *U-198*'s tactics were repeated with '...a slight zig-zag at about 3 knots in a mean south-easterly direction.' As time passed the echo grew weaker, and it seemed to Goord that the U-boat was going deeper. Several hundred feet down, Waldegg was probably struggling with damage caused by Tuke's attack a few hours before, which limited his ability to get really deep. In *Godavari*, however, the occasional sharp echo through the U-boat's wake confirmed that '...the enemy was still just where we wanted him, 500 to 800 yards ahead.' Goord later recorded that: Owing to [the U-boat's]...persistence in maintaining a constant mean course, the manoeuvring of the hunting vessel was comparatively simple – Slow Ahead with large wheel to bring the U-boat ahead, then Stop, Slow Ahead again, and so on.⁵²[52]

With the stricture from Ormsby '...to hold on to the contact at all costs,' ringing in their ears, the A/S Control Officer (ASCO), Lieutenant John Akehurst, RIN, and the senior asdic rating, Leading Seaman (SD) Bas Arat Gill, RIN, in *Godavari*'s asdic hut, clung doggedly on to the intermittent contact. *Taff*, *Nadder* and *Cauvery* '...closed at full speed towards the scene of action with their "harmonicas" [Foxers] playing a frenzied tune astern of them.'⁵³[53] *Findhorn* (Lieutenant Commander James Dawson, RD, RNR) and *Parrett* (Lieutenant Commander Thomas Hood, RNR) were closer.⁵⁴[54] They were some 7½-9 miles to the southward and joined at their best speed – about 16 knots

51[51] Unfortunately the asdic trace in ADM 199/499 had now completely faded and is unreadable.

52[52] 'Action against U-boat – 12 August 1944,' [Commander Goord, RIN], HMIS *Godavari*, n.d., ADM 199/498.

53[53] 'Report of Proceedings for Period 30 July – 17 August 1944,' Commander G.A.G. Ormsby, RN, Senior Officer 60th Escort Group, HMS *Taff*, STA/B/19, 17 August 1944, ADM 199/498.

54[54] Dawson had been in command of *Findhorn* for over a year, since June 1943. *Navy List*, October 1944.

with their anti-Gnat Foxers streamed.⁵⁵[55] *Godavari* was already in V/S touch with these ships and within 30 minutes they were both within asdic range of the U-boat. *Findhorn* then passed north-about of *Godavari* with her asdic probing between east and south-west searching for her consort's contact. As *Findhorn* turned to approach the U-boat from the north-east she got contact, initially to the southward at 700 yards. A few minutes later her ASCO, Lieutenant George Nash, RNVR, was confident that this was the U-boat.⁵⁶[56]

Goord directed that the first ship which got contact to carry out an attack with her Hedgehog. This turned out to be *Findhorn*, but the mutual interference between her asdic and *Godavari*'s was so great that Goord decided to put her on an containing "Observant" square search around the scene, while *Parrett* supported the attacks on the U-boat. However, Goord's plan, still in the midst of transmission, was overtaken by *Findhorn*'s aggressive approach. No sooner had Dawson obtained contact, than he signalled his intention to attack. Goord accepted this, and put *Parrett* on the "Observant", '...hoping that the [asdic] frequency similarity between *Findhorn* and *Godavari* would fox the U-boat as much as it did us.' As it turned out, the U-boat seemed to be surprised by *Findhorn*'s approach, for *U-198* took no avoiding action. 'He continued happily, stern-on to *Godavari* ,' Goord later wrote, 'while *Findhorn* came stealthily up on his port beam.'⁵⁷[57] At 1805 *Findhorn* had established firm contact at 215° and a range of 1,500 yards. Dawson then altered course to point at the centre bearing and ordered 10 knots for a Hedgehog attack. A minute later, *Findhorn*'s plot estimated the U-boat to be on a course of 195°. By 18 07 the range was down to 1,300 yards. Shortly after this, Dawson

⁵⁵[55] 'Commanding Officer's Narrative of Attack on U-boat on [12] August 1944,' Lieutenant Commander J. Crosbie Dawson, RNR , HMS *Findhorn*, 15 August 1944 , ADM 199/498.

⁵⁶[56] See Track Chart attached to 'Commanding Officer's Narrative of Attack on U-boat on 15 [sic] August 1944,' Lieutenant Commander J. Crosbie Dawson, RNR , HMS *Findhorn*, 15 August 1944, ADM 199/498.

⁵⁷[57] 'Action against U-boat – 12 August 1944 ,' [Commander Goord, RIN], HMIS *Godavari* , n.d., ADM 199/498.

became concerned that *Godavari* was about to cross over the U-boat's bearing, which could produced confusing wake echoes that might distract his operators. The message which got through to Goord suggested that *Godavari* was actually over the U-boat, which he found '...somewhat disconcerting.' Fortunately, the momentarily confusion passed, and a few minutes later it was clear that both ships were on the same target. *Findhorn's* contact was now at 1,150 yards with moderate low doppler, indicating the U-boat was moving in the direction estimated by the plot.⁵⁸[58]

With the attack instruments lined up, Dawson ordered the wheelhouse to "Steer by asdics", so that the helmsman would follow a pointer controlled by the asdic to ensure the was ship accurately pointed at the Hedgehog's "gun bearings", thus allowing for the deflection to aim ahead of the target thereby compensating for the sinking time of the projectiles.⁵⁹[59] A minute later, and the Type 147B depth-finding asdic measured the U-boat's depth as 300 feet. At this point it was noticed that the U-boat's bearing was unexpectedly moving right, caused by a fault in the asdic pointer in the wheelhouse. Nash immediately corrected the problem by verbally reporting the course to steer. The range was now 750 yards and Nash, in the asdic hut, ordered the asdic ratings to switch over to the "Q" Attachment which, with its narrower beam, produced more accurate target bearings. At 1810, as the range to the U-boat approached 250 yards, *Findhorn's* Hedgehog fired with a sound like a short machine-gun burst. To Goord's...delight (not altogether free from a slight disappointment in not having a longer run for out money) the disappearance of *Findhorn's* projectiles was followed after some seconds by two sharp reports.⁶⁰[60]

⁵⁸[58] 'ASCO's Narrative of Attack on U-boat by HMS *Findhorn*,' Lieutenant G.W. Nash, RNVR, 12 August 1944 , ADM 199.498.

⁵⁹[59] For a description of the use of asdic and ATW see: M. Llewellyn-Jones, 'The Royal Navy and the Challenge of the Fast Submarine, 1944-1954: Innovation or Evolution?' in, Richard Harding (ed.), *The Royal Navy, 1930-2000: Innovation and Defence* (London : Cass, 2005), pp. 135-169.

⁶⁰[60] 'Action against U-boat – 12 August 1944 ,' [Commander Goord, RIN], HMIS *Godavari* , n.d., ADM 199/498.

Then, as *Findhorn* passed close by the attack point, *Godavari* regained contact from a position 600 yards to the west of the stricken U-boat. Goord then directed *Parrett* to take over as the contact holder, while he temporarily disengaged *Godavari* to get rid of the mutual asdic interference, while *Findhorn* re-attacked with her Hedgehog. While this was being organised, Akehurst and Gill, in *Godavari*'s asdic hut reported hearing a small underwater explosion. Three minutes later, another, much heavier explosion was heard and felt, which Goord likened to a shallow depth-charge detonating at a distance of 500 yards and also shook *Godavari* and *Findhorn*. Dawson wondered if the U-boat might suddenly surface, so to allow for unrestricted manoeuvring he ordered the anti-Gnat Foxers to be slipped. Shortly afterwards, *Godavari*'s asdic contact faded, though *Parrett* still seemed to be holding something. Goord, hoping to regain contact, hauled *Godavari* out in preparation for a depth-charge attack and during this manoeuvre, Akehurst again reported hearing two further small explosions, all of which seemed to emanate from the position of the U-boat. Both *Parrett* and *Findhorn* were in contact, although on doubtful echoes, but it was Dawson who muscled his way in for a second Hedgehog attack at 1831. This contact, Dawson was fairly confident was on a non-sub caused by the disturbance from the first attack. The Hedgehog projectiles fell in the same spot as the first pattern.⁶¹[61] At this point, Goord later recorded, that the...ship's company, not understanding the passive tactics [he had] adopted, were itching to set to with depth-charges, in the hope of bringing up a target for the main armament, and for 24 hours I feel that my stock as Commanding Officer fell to a very low level.⁶²[62]

By now the remainder of the Group were close by, and Ormsby in *Taff*, took direct charge of the action. The Senior Officer ordered *Godavari* to carry out an "Observant", but just as the order was made, *Findhorn* and *Parrett* both lost contact, while *Godavari* regained another intermitted echo. Ormsby rapidly re-ordered his plan, and *Findhorn* was

61[61] 'Commanding Officer's Narrative of Attack on U-boat on [12] August 1944,' Lieutenant Commander J. Crosbie Dawson, RNR, HMS *Findhorn*, 15 August 1944, ADM 199/498.

62[62] 'Action against U-boat – 12 August 1944,' [Commander Goord, RIN], HMIS *Godavari*, n.d., ADM 199/498.

sent off on the “Observant” instead. However, after a few minutes *Godavari*’s contact began to fade amidst the Foxer symphony. The echo was fitfully held for another five or six minutes, when ‘...it disappeared for the last time.’⁶³[63] By this stage, Goord was convinced that the U-boat had been destroyed, for none of the asdic contacts had had submarine-like characteristics and, if the heavy detonation at 1816 came from the U-boat, no submarine would have been able to withstand such an internal explosion. It seemed to him that the intermittent echoes were non-subs caused by the disturbance of *Findhorn*’s first attack and the sinking U-boat.

However, Goord considered the possibility that the 1816 explosion could have been a Gnat anti-escort torpedo, though because the U-boat had been deep throughout the hunt, this seemed unlikely. Nevertheless, Ormsby put the whole group on an “Observant”, while *Taff* and *Godavari* carried out an asdic sweep through the last attack position. No echoes were obtained, so Ormsby widened the search, putting *Taff* and *Godavari* on a 2-mile “Observant” and the rest of EG60 were spread out on a 4-mile “Observant”. As night fell, all the ships were reorganised on a box patrol with 40 miles sides, in case the U-boat was only damaged and lying doggo with the intention of escaping on the surface in darkness. All doubt, at least in Goord’s mind was banished when a large oil patch was reported, with large brown bubbles still welling up. As the Group steamed through the oil, ‘...three objects best described as resembling brown tripe were seen by a number of officers and ratings on the bridge.’ They were floating just below the surface and about a foot square but in the prevailing conditions could not be recovered. In many ways, the destruction of *U-198* had been a textbook action, expressed very adequately by Leading Seaman Bas Arat Gill ‘...who remarked that it was “just like an A/S.P.9”,’ which was a training A/S hunt, where the submarine was unmarked and unrestricted in evasion. Its object was to ‘...practice A/S vessels in hunting and attacking a submarine previously located.’⁶⁴[64]

⁶³[63] *ibid.*

⁶⁴[64] ‘Action against U-boat – 12 August 1944 ,’ [Commander Goord, RIN], HMIS *Godavari* , n.d., ADM 199/498; ‘Instructions for Submarine and Anti-Submarine

Assessments

After careful scrutiny of the records and having interviewed all the Commanding Officers concerned, Ormsby submitted a brief analysis of the action. He noted that asdic conditions had been good throughout the 12th and there were very few non-subs, apart from those produced by ships' wakes. *Godavari* had performed excellent service by holding the contact for 53 minutes, until her consorts arrived. Ormsby noted that Goord, *Godavari*'s CO was a qualified A/S officer.⁶⁵[65] As for the attack by *Findhorn*, Ormsby pointed out that the Type 147B depth-finding asdic had maintained a good trace during the approach, which was only achieved against '...a large and solid concentrated object such as the submarine could give....'⁶⁶[66] A non-sub normally gave readings right up to the surface, as was the case during *Findhorn*'s second attack (which was most probably carried out against the disturbance caused by the first attack). Furthermore, *Godavari* estimated that *Findhorn*'s attack was accurately placed, and after the expected interval at least two Hedgehog projectiles were heard to explode. Ormsby was, therefore, convinced that the attack was accurately made against the U-boat. He also noted that, from a trial carried out by the Admiralty in 1942, ...against a full-scale model of a section of the captured German U-boat *Graph* [U-570], one torpex-filled Hedgehog projectile, placed with its nose against a plate 2' 6" from the pressure hull, blew a hole 12 feet square in the latter.⁶⁷[67] It seemed very likely that the U-boat had suffered damage from the attack by the 851 Squadron Avenger. This was borne out by the lack of evasive manoeuvre by *U-198*

Exercises (Short Title – ISAX), 1938,' Anti-Submarine Warfare Division, CB 4000 [BR 1678], June 1943, Admiralty Library, p. 46.

⁶⁵[65] Goord completed the course at Portland in 1939. A.B. Goord, 'The Royal Indian Navy,' in, Commander D.J. Hastings, RINVR, (Ed.), "*Bombay Buccaneers*": *Memories and Reminiscences of the Royal Indian Navy* (London: Basca, 1986), p. 42.

⁶⁶[66] 'Analysis of Attack on U-boat,' Commander G.A.G. Ormsby, HMS *Taff*, 20 August 1944 , ADM 199/498.

⁶⁷[67] *ibid.*

during *Findhorn*'s attack and, especially, that the U-boat did not go any deeper than 300 feet, '...whereas the normal depth to which German U-boats dive to avoid attack is at least 500 feet.' 68[68] Even if the Hedgehog was not, in itself, a lethal weapon, the evidence of damage from the Avenger attack as well as the series of explosions (some of them very heavy) after *Findhorn*'s attack, the subsequent loss of asdic contact and the persistent welling of oil from the attack position, all strongly suggested that the U-boat had been destroyed.

Flag Officer, East Africa, concurred with this assessment and, particularly drew the Admiralty Board's attention to the excellent teamwork between Goord's *Godavari* and Dawson's *Findhorn*. Apart from the individual efficiency of each ship, this was due to the comprehensive training, enthusiasm and leadership demonstrated by Ormsby. The effectiveness of Force 66 also owed a debt to Broome, who kept a watchful eye on the overall deployment and tactical handling. He was especially commended for ensuring that all the escorts were up to 88% of their fuel state when they arrived on the scene of the action. For their efforts, Goord and Dawson were each awarded the Distinguished Service Cross, while Broome, Ormsby, Akehurst, Nash and Gill were all Mentioned in Despatches. 69[69]

Subsequently, the Official and Staff Historians have made brief mention of this action, and conclude that Admiral Sir James Somerville, C-in-C, Eastern Fleet, acted against Admiralty advice by forming Force 66 as one of the '... "A/S Carrier Support Groups" which, in more naked language, could have been called "Hunter-Killer Groups". 70[70]

68[68] *ibid.*

69[69] 'Sinking of German Submarine on 12 August 1944,' Rear Admiral R. Shelley, Flag Officer, East Africa, EA.0951/S, 22 August 1944, ADM 199/498; Seedie, *Seedie's Roll of Naval Honours & Awards, 1939-1959* (Tisbury: Ripley Registers, 1989).

70[70] 'Operations by Force 66 A/S Carrier Support Group, Indian Ocean, 1944,' Section 104 in, 'Carrier Borne Air Operations by the Eastern Fleet in 1944,' Chapter XIX, 'History of Naval Aviation,' Volume III, (Corrected from Top Copy 24 November 1964 and 21 June 1968), NHB, T.21183, pp. 15-20 (pp. 519-524). Somerville was succeeded by Admiral Sir Bruce Fraser on 23 August 1944. *Navy Lists*, June and October 1944.

Stephen Roskill, the Official Historian, while making the same point about the Admiralty's stance, concluded that the...solitary success can hardly be taken to vindicate the departure from the principle which all our recent experience had substantiated – namely that, unless and until a surplus of sea and air escorts was available over and above those needed for convoy duties, hunting for U-boats was unlikely to prove a profitable venture.⁷¹[71]

The Naval Staff History provides the same judgement that the sinking of *U-198*, which was

...the only success of the escort carrier hunting groups. It confirmed the Admiralty view based on experience in the Atlantic, that escort carrier groups are best employed working in conjunction with convoy and not as hunting forces unconnected with convoys.⁷²[72]

Another of the Staff Histories (which was not issued) makes the same claim:

It was the only success achieved by Force 66 in its seven A/S search operations, and it must certainly not be taken as evidence that “hunter-killer” operations constitute a profitable business, even if escorts have nothing better to do.⁷³[73]

There was, undoubtedly, a large measure of luck in Force 66's hunt for, and destruction of, *U-198*. Roskill, however, grudgingly concedes that over the succeeding months the German U-boat threat in the Indian Ocean had collapsed as a direct result of the lack of reinforcements, shortage of supplies (especially of torpedoes and fuel), and the closure of

⁷¹[71] Stephen Roskill, *The War at Sea 1939-1945*, Vol. III, Part II: *The Offensive 1 June 1944-14 August 1945* (London: HMSO, 1961), pp. 204-205.

⁷²[72] ‘War with Japan,’ Vol. IV, ‘The South-East Asia Operations and Central Pacific Advance,’ Historical Section, Naval Staff History, Second World War, CB 3303(4), HS.12/55, 2 May 1957, Admiralty Library, pp. 196-198.

⁷³[73] ‘Operations by Force 66 A/S Carrier Support Group, Indian Ocean, 1944,’ Section 104 in, ‘Carrier Borne Air Operations by the Eastern Fleet in 1944,’ Chapter XIX, ‘History of Naval Aviation,’ Volume III, (Corrected from Top Copy 24 November 1964 and 21 June 1968), NHB, T.21183, pp. 15-20 (pp. 519-524).

their main base at Penang by RAF mining operations.⁷⁴[74] It seems, therefore, that the offensive measures put in place by Somerville , and continued by Admiral Fraser, proved successful. Nor has any evidence yet been discovered for this anti-hunter-killer group philosophy emanating from the Admiralty or the implication of C-in-C, EF's willingness to forego convoy. Furthermore, it is clear that convoy was in operation in the Indian Ocean , especially for high value shipping.⁷⁵[75] However, calculations were made over the need for convoy to be imposed when the U-boat threat was meagre. Losses to enemy action could, in these circumstances, be less than the reduction of carrying capacity caused by the imposition of convoy (typically 12-20%).⁷⁶[76] The equation depended ultimately on the level of sinkings achieved by the U-boats in a given area. But the controlling authorities also had to take into account other factors which influenced this metric. The U-boats in the Indian Ocean were mainly blockade-runners whose secondary purpose was to sink shipping while *en route* to their destination in the Far East . With a meagre and ephemeral threat of this nature, the losses of ship could be minimal, while imposition of convoy could significantly effect the delivery rate. Furthermore, starting convoys in any given area would take some weeks to come into operation, by which time the particular threatening U-boat would probably have moved on.

In these circumstances, there was a strong case for using A/S forces in more “offensive” operations, provided there was timely intelligence to bring them close enough to the enemy so that their organic air search could pin-point the U-boat. Certainly at the time of the operation, the Captain C.D. Howard-Johnston Director of the Anti-U-Boat Division in the Admiralty (and an ardent convoy man), considered: This operation, which achieved the destruction of a U-boat by Force 66 after a search lasting seven days, must rank amongst the finest of the Anti-U-Boat campaign. ...2. The fact that Force 66, at the time

⁷⁴[74] Stephen Roskill, *The War at Sea 1939-1945*, Vol. III , Part II: *The Offensive 1 June 1944-14 August 1945* (London: HMSO, 1961), pp. 204-205.

⁷⁵[75] See, for example, ‘War Diary, June 1944,’ C-in-C, Eastern Fleet, 1859/EF.682/22, TSD .4426/44, 20 July 1944 , NHB.

⁷⁶[76] M. Llewellyn-Jones, ‘The Royal Navy on the Threshold of Modern Anti-Submarine Warfare, 1944-1949,’ (PhD, King’s College, *London* , 2004), p. 31.

of the U-boat first revealed its presence by torpedoing *Empire City*, was some 1,700 miles away and yet was able to locate and destroy it, is a most convincing example of the value of Air Hunting Groups in large areas such as the Indian Ocean.⁷⁷[77]

Within a month of the action, the Admiralty had issued additional guidance on the tactics to be employed by carrier support groups in ocean operations.⁷⁸[78] Against the U-boats, like *U-198* which were still not fitted with the schnorkel (and therefore relied on the surface to recharge their battery, replenish the air in the boat, and to travel large distances), air search presented an effective means of locating the enemy. This was especially the case for carriers equipped with aircraft, such as the *Avenger*, which had a high cruising speed and long endurance, and were therefore capable of searching large areas and attacking U-boats that were sighted with a reasonable chance of success. But, even with a good sighting, the subsequent A/S hunt did not always yield results, as Force 66 discovered in early December 1944 during an operation lasting 18 days which failed to relocate and destroy an enemy U-boat that had been attacked by a RAF Liberator.⁷⁹[79] The success of the Atlantic Hunter-Killer groups was heavily dependent on accurate and timely intelligence from code-breaking activity. In that theatre it was evident that British escort carriers were less effective than their USN counterparts, probably because the USN was able to rapidly concentrate all airborne aircraft round a U-

⁷⁷[77] Minute, Captain C.D. Howard-Johnston, DAUD, 28 September 1944 , ADM 199/498. For Howard-Johnston's views on the central value of convoy (especially when A/S forces were comparatively weak), see: Commander D.A. Rayner, RNVR, *Escort: the Battle of the Atlantic* (London: William Kimber, 1955), p. 87.

⁷⁸[78] 'Operation of CVE Support Groups and Sea/Air Hunting Forces,' Section 4, 'Monthly Anti-Submarine Report, August 1944,' DAUD, CB 04050/44(8), 15 September 1944 , NHB, pp. 14-17.

⁷⁹[79] '18-Day A/S Search,' in 'East Indies Fleet War Diary,' Enclosure to Commander-in-Chief, East Indies Station, No. 472/EI.1409/Ops, TSD .4443/44, 11 February 1945 , NHB.

boat sighting – a lesson which Broome highlighted in his operation against *U-198*.

Indeed, he remarked that:

“Getting” airborne aircraft (who are not on the [ship’s] Radar screen, and who have been keeping R/T silence up to that moment) to a fixed position cannot be done by wishful thought, and it requires a lot of practice, which it certainly is going to have in Force 66....80[80]

Fortunately, for the British, in this action, the Force (doubtless guided by Ormsby) had exercised the escorts extensively in co-operation with the carrier-borne aircraft, as well as to hone individual and group A/S hunting and attack procedures.81[81]



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80[80] ‘Report of Proceedings – Force 66, Section 1, Narrative,’ [Captain J.E. Broome, RN], HMS *Begum*, 18 August 1944 , ADM 199/498.

81[81] ‘Report of Proceedings for Period 30 July – 17 August 1944,’ Commander G.A.G. Ormsby, RN, Senior Officer 60th Escort Group, HMS *Taff*, STA/B/19, 17 August 1944, ADM 199/498.