

Foreword

The first Navy air-sea rescue occurred on 21 August 1918 when Ens. Charles H. Hammann landed his Macchi M-5 seaplane fighter outside of the Pola Harbor entrance (now Pula, Croatia) to rescue his flight leader, Ens. George H. Ludlow who had been shot down. Ensign Hammann made a difficult landing on choppy water within range of the harbor defenses while the enemy were still in the area. The rescue had many of the features that were typical of the rescues made by Army and Navy flying-boats in the Pacific thirty-five years later: close proximity to the enemy, a rough sea, and a difficult take-off in an over-loaded plane.

Despite the example that Ensign Hammann set, dedicated air-sea rescue units were not organized by any nation until long after World War I because there was no perceived need for them during the interwar period. Even after Pearl Harbor was bombed, there seemed to be little need for the Navy and the Army Air Force (AAF) to establish specialized Air-Sea Rescue units. In fact, until the summer of 1944, the U.S. Navy did not have dedicated air-sea rescue squadrons. Instead, aircraft in the patrol squadrons were detailed for rescue work on an ad hoc basis as the situation demanded.

Only the United States Coast Guard specialized in air-sea Search and Rescue, but it had a limited rescue capability that was confined to coastal waters. Traffic which was not coastal depended on commercial shipping for assistance, which at the time seemed to be adequate.

By the spring of 1943, it had become evident to both the Army Air Force (AAF) and the U.S. Navy that the over-water distances in the Pacific Theater created a need for a specialized air-sea rescue organization. In that year, the Joint Chiefs of Staff looked for a way to achieve coordination of effort between the Navy and the Army Air Force. There was also a need to develop a close liaison with Allied services. There was common agreement that an integration of existing Navy and Army Air-Sea Rescue organizations would lead to standardization of equipment and would establish common rescue procedures among the Armed Services. Though the Army and the Navy agreed on the need for improvement, there was disagreement on how to achieve it.

The Army preferred to retain its own rescue service, but favored the establishment of a liaison committee to provide coordination of training, efforts, procedures, and equipment. On February 15, 1944, the

committee became the Air-Sea Rescue Agency (ASRA), but it was not an operations command.

Coast Guard

The Coast Guard operated as part of the Navy during the war, and its air units were employed in anti-submarine warfare (ASW) and air-sea rescue work (ASR). The Coast Guard had been given ASW duties within the Sea Frontiers beginning in early 1942, but by mid-1943, the submarine offensive off the coasts of the United States had diminished significantly and the Coast Guard air stations gradually shifted the focus to ASR missions. The ASR operations were based on the British system and Coast Guard officers received training at the ASR school Blackpool, England. As air traffic and merchant marine operations increased in scope, incidents requiring ASR occurred more often so that by the end of 1943 the Coast Guard air stations on the West Coast operated primarily as ASR units.

The Coast Guard air station at San Diego was the home of the West Coast air rescue units. Between Jan 1, 1944 and December 1, 1945, 124 aircraft went down in the San Diego area. Of the 201 pilots and crews involved, 137 were saved, 59 were killed by collision or impact with the water and five were lost because of lack of or improper use of equipment.

Army Air Force

The Army was the first of the services to form dedicated air-sea rescue squadrons. In the fall of 1943, the AAF drafted plans to organize seven Emergency Rescue Squadrons (ERS), but only six were organized before the war ended. The new rescue squadrons were to be operational by the spring of 1944 to support the Pacific Air Forces, and provide rescue support for the Air Transport Command. Initial PBY training was provided by the Navy at NAS Pensacola.

The AAF procured Canso PBY-5As which the Army called OA-10s, that were manufactured under license by Canadian Vickers in Montreal. Delays in forming the squadrons occurred and only the 1st and 2nd ERS were operational by the summer of 1944. The 3rd became operational in the Southwest Pacific by the end of the year, the 4th, 5th, and 6th were not operational until mid-1945.

Until the arrival of the specialized ERS units, the Army assigned aircraft to air-sea rescue missions on an ad hoc basis. The practice put a strain on the tactical squadrons whether they were fighter or bomber squadrons. Until the specialized ERS units arrived in 1944, any airplane assigned to the mission was a land plane. Almost all aircraft types were used, but the workhorses of the Army's rescue program were Liberators, Flying Fortresses, and Super-fortresses. The Army's planes shared the

assets of long range and adequate self-defense, but none of them could land on water.

A postwar analysis of the Army's use of the PBY said:

The rescue record of the Catalinas was a spotty one, ranging from some of the most spectacular successes of the war to discouraging failures. Its range and load capacity were satisfactory, its cruising speed ideally slow, but the Catalina had trouble in landing in rough seas and in taxiing with a heavy load aboard. During one period in 1944, CBI's [China Burma India Theater] Eastern Air Command reported that half the Catalinas sent on rescue missions cracked up on landing, leaving two planes in trouble instead of one. The Catalina, awkward in flight and lightly armed, was quite vulnerable to enemy attack.¹

Navy

The Patrol squadrons' mission was to locate the enemy at sea and report. Up to, and until several weeks after, the attack on Pearl Harbor, only PatWing-10, VP-101 and VP-102 faced the Japanese. Both Squadrons, equipped with PBY-4s, were based at Sangley Point and Olongapo. The squadrons were tasked with flying patrols, attacking Japanese ships, and aerial photography missions. From 27 April to 3 May 1942, the wing flew Army nurses, high-ranking officers, and pilots to Australia.

Demands for air-sea rescue picked up considerably during and after the Battle of Midway, 4-7 June 1942. As the U.S forces pushed deeper into the South Pacific, the patrol squadrons were called upon more frequently for air-sea rescues while at the same time, more collateral missions were added, such as mine-laying, defensive patrols around surface forces at sea, and diversionary, harassing attacks against enemy bases and islands.

By 1943, the ad hoc approach to ASR was putting a strain on the resources of the patrol and bomber squadrons that resulted in the creation of six specialty squadrons in 1944 and 1945 whose sole mission was air-sea rescue. The arrival of the specialty squadrons in the South Pacific did not end the practice of tapping the patrol squadrons for air-sea rescue work, but the new squadrons did alleviate the pressure. The six special units were employed in areas where the intensity of operations made calls upon their services frequent; elsewhere patrol planes continued to fly air-sea rescue missions on an ad hoc basis.

Not all the rescues involved an open-sea landing. If the sea was too rough, the planes remained aloft, circling the people to be rescued while calling-in surface vessels. The plane remained on station until the surface vessel arrived. If the men in the water were under enemy fire or

were in imminent danger of being captured, the pilot landed regardless of the sea state.

In the Central Pacific the problem of making an open-sea landing was acute. Only the most skillful and experienced seaplane pilots could land and take off again in the enormous swells, the job required as much seamanship as airmanship, and it became standard practice to avoid open-sea landings unless conditions were favorable and there was no other rescue agent available.²

A violent landing in fifteen-foot swells could cause severe structural damage. VH-3 had five of their PBMs declared a loss after suffering major damage during rescue operations. Squadrons that were equipped with the Martin PBM Mariner had the advantage of aircraft equipped with jet-assisted takeoff rockets (JATO), that made taking off in heavy seas, with a heavy load, or under fire, possible. A JATO-equipped PBM could take off in under 10 seconds versus about a minute without. But even with JATO, takeoffs in heavy seas often caused damage to the plane. PBM pilots would land in close to shore where the sea was calmer, and then taxi many miles to the rescue site. They did that because JATO allowed them to take off in seas they could not land in.

Even when the sea state was good enough to land, damage to the hull could occur. The PBYS were particularly susceptible to “popping rivets” on any hard landing. All PBY navigators had a hefty supply of wooden pencils on hand for the crew to plug the rivet holes. The standard wooden pencil was about the diameter of a rivet hole. Crewmen shoved the pencil in the hole, broke it off, and used the remaining piece to plug another hole. The “field expediency” worked well enough to withstand a takeoff but probably not the next landing. Plugging rivet holes with a pencil was a common practice on all PBYS.

By the end of the war, air-sea rescue had improved to the point where chances of rescue were good. Throughout the war nearly 5000 USAAF aircrew members were rescued, testifying to the improved conditions in air-sea rescue.³

Dwight R. Messimer, author, *In the Hands of Fate: The Story of Patrol Wing Ten, 8 December-1941-11 May 1942*, Naval Institute Press