

ward Sunnyvale back for ASX blimps, and of course the Navy wanted to contain the involved three covered airfields. Now however, with commendable "statesmanship" on both sides the situation was smoothed over, and using Sunnyvale to great advantage, Watson had the TC-13 flying again by 1 February, and the TC-14 by the 8th. These two Army discards became the nucleus for Airship Squadron THIRTY-TWO (ZP-32).

Eventually the Navy "bought back" the Sunnyvale base from the Army, and made wide use of it for numerous purposes. It was soon renamed MOFFETT FIELD in honor of the late Rear Admiral Wm. A. Moffett, the highly respected first Chief of the Navy Bureau of Aeronautics.

I shall never forget this author's part in this "swap" of Sunnyvale back to the Navy. Being on airship duty in the Navy Department, I drew the job of clearing this latest deal with Army Headquarters. With hat in hand, my call on General George C. Marshall, Army Chief of Staff, and General H. H. ("Hag") Arnold, head of the Army Air Corps, turned out to be both pleasant and expeditious. I had taken the advance step of getting an understanding from a Congressional authority to procure funds to enable the Army to replace Sunnyvale.

To round out his almost hypothetical squadron until new patrol blimps began to roll off the production line, Watson was forced to raid the civilian advertising blimp fleet down in southern California. Erased from the sides of these drafted aerial signboards was the subtle exhortation to the public to "BUY SOMEONE'S HEELS AND SOLES" and in place the somber "U. S. NAVY" was painted on in huge black letters. Besides this war paint, each little ship got a .30 caliber machine gun, two bomb racks, and a Navy radio.

The first of these aerial militiamen, the RELIANCE, went on duty with ZP-32 on 5 March as the L-6, and was assigned to patrol in her old stamping grounds, the Los Angeles-San Pedro Harbor area. Three

days later, the RANGER, now the L-8, began operating from Treasure Island (once called Goat Island) in San Francisco Bay, as a unit of ZP-32. On 10 March, the RESOLUTE which "Art" Sevell had taken to sea in civilian garb and armed only with a hunting rifle, joined up as the L-4. Next, the ENTERPRISE which for years had been a familiar aerial signboard in the skies around the nation's capitol, joined Watson's colors as the L-5. What even its own crew were not aware of, the ENTERPRISE had for sometime unknowingly been serving as a target for the then highly classified RADAR development project being secretly conducted by the Naval Research Laboratory across the River from the Washington Airport where the ENTERPRISE based. Meanwhile, the RAINBOW, remaining member of the advertising fleet, got into a sailor suit and joined up at Lakehurst as the L-7.

It was to be 31 October, or eleven months after the Pearl Harbor raid, before the Pacific Coast received its first new patrol blimp off the production line.

Our pitiful deficiencies extended also to operating bases, other facilities, military equipment, helium supply and storage, personnel-- indeed to almost any other need one might mention, and all to about the same deplorable degree. Our remaining, still active-duty trained Regular Navy airship personnel numbered only a small handful, and many of them were scattered irrevocably throughout the widespread Naval establishment. One year's airship pilot training class, for example, had consisted in toto, of only TWO young student officers.

Thus, on "Pearl Harbor" Day, what on paper we laughingly referred to as our "airship strength" in reality consisted of only four brand-new, undebugged, feebly supported, unequipped K-ships; the poorly supported and undeveloped Lakehurst Naval Air Station; plus a very small number of widely scattered trained airship personnel.

were all we needed for dealing with the enemy submarine threat. Obviously we needed a full team of trained ASW specialists, but we did know that the properly equipped blimp was a bona fide member of that team.

The sad fact is that our ASW deficiencies extended far beyond just airships. Indeed we were in deplorable shape with respect to our entire ASW team.

Samuel Eliot Morison, Professor Emeritus of History at Harvard University, and as a rear admiral in our Naval Reserve served as the Navy's official historian of WW II, has summed up the situation as follows: #

"This writer cannot avoid the conclusion that the United States was woefully unprepared, materially and mentally, for the U-boat blitz on the Atlantic Coast that began in January 1942. He further believes that, apart from the want of air power which was due to prewar agreements with the Army, this unpreparedness was largely the Navy's own fault. Blame cannot be justly imputed to the Congress, for Congress had never been asked to provide a fleet of subchasers and small escort vessels; nor to the people at large, because they looked to the Navy for leadership. Nor can it be shifted to President Roosevelt In the end the Navy met the challenge, applied its energy and intelligence, came through magnificently and won; but this does not alter the fact that it had no plans ready for a reasonable protection to shipping when the submarines struck, and was unable to improvise them for several months."

The topic of GENERAL initial ASW unreadiness to which Historian Morison refers is well beyond the scope of this volume. The sole intention herein is to relate and interpret the parts blimps had in WW II. This understandably requires at least some examination of the almost incredible background of airships in our Navy, and of the strenuous stern chase which faced them in preparation for their contributions to the winning of WW II.

Part of the gross unreadiness in the airship field admittedly

The Battle of the Atlantic
by Samuel Eliot Morison

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Early in World War II, the seaward approach to San Francisco Bay was the backdrop for one of the weirdest chapters in the annals of aeronautics -- the strange tale of the airship L-8.

As an aeronautical mystery thriller alone, this adventure is worthy of its telling. But it also has historical value through its exposure of the threadbare beginnings of our NM II airship program.

In the twilight period before our interest in that global conflict flared into open belligerency, I had several times visited the West Coast in connection with the location of contemplated airship facilities on that frontier. Rear Admiral John W. Cresaslade, Commandant of the Twelfth Naval District with headquarters in San Francisco, for some time had wanted airships assigned to his territory for use against enemy submarines which were certain to try to operate in that lucrative shipping area. Rear Admiral Sadler, our Commandant in the Panama Canal Zone also had asked for airships for that important focus of waterborne shipping. But blimps couldn't be bought off the shelf and so on Pearl Harbor Day our foot-dragging in airship matters caught us without a single naval blimp either on the Pacific Coast or in the Canal Zone.

Our entire airship inventory on 7 December 1941 consisted of the meager and motley assortment we had at Lakehurst. Four were small training craft of the type used by Goodyear for advertising. Three of these tiny "L"-ships were already several years old; a

its TC-13 and TC-14 and used them as trainers. The more recent prototype K-2 was still urgently needed for research and development purposes. The first four production ships of that type, namely K-3, K-4, K-5 and K-6, though still not adequately equipped, were earmarked for our first airship squadron for the Atlantic. So there wasn't much choice when it came to sharing our blimps with Admiral Greenlade out on the California Coast, and there was no immediate prospect whatsoever for the Canal Zone.

Thus, after Jap subs had revealed their presence along our Pacific Coast, the old Army veterans TC-13 and TC-14 were tagged to go to the scene. In mid-January (1942), Lakehurst accordingly dismantled and crated these craft, and shipped them by rail in eleven freight cars to the Navy's former naval airship station at Sunnyvale some 40 miles south of San Francisco. As the result of a somewhat shady manipulation some years earlier, the Navy had "given" the surprised and reluctant Army Air Corps the Sunnyvale station in what was labelled an "exchange" for three Army air ~~base~~ fields. The Navy eventually "bought back" the Sunnyvale base, later renamed Moffett Field, but the Navy's representative out there, Lieutenant Commander George F. Watson, had an early "political" situation on his hands at Sunnyvale as well as the technical problem of quickly unpecking and re-erecting these TC-ships. Nevertheless, that task was commendably executed and the TC-13 and TC-14 became the nucleus of Watson's Airship Squadron 32 (SP-32).

To round out his almost hypothetical unit until production patrol airships would come ~~of~~ ^{off} the assembly line, Watson was

been done informally in the case of the RESOLUTE which became the Navy L-6. The big signs on her sides exhorting the public to "Buy Somebody's Heels and Soles" were erased and a somber "U.S. NAVY" in huge, navy blue block letters painted on. Besides this war paint, the ship got a .30 caliber machine gun, two bomb racks and a Navy radio. Officially accepted by ZP-32 late in February, the L-6 was assigned to service in her old stamping grounds off San Pedro. Another Goodyear advertiser doffed its civilian attire and sped up to Sunnyvale to become the L-4. Then the ENTERPRISE, for years an aerial signpost around Washington, D.C., joined the colors and became the L-5. There was still one more, the RANGER, which got into a sailor suit and joined George Watson's airship militia early in March as the L-8.

This original ZP-32 aggregation was ^{in fact} a conglomerate lot. But so were the embattled farmers at Lexington and like them, these assorted blimps stood their ground with aerial counterparts of ~~resh~~ pitch forks. The obsolete TC-ships were a particular problem to their crews. These craft couldn't have been operated had it not been for the consistent northwest winds off San Francisco which were sure to blow them back to the mainland when their aging powerplants faltered. For several weeks this airship militia had neither communication nor coding facilities. To get operating instructions for the day, the airships had to fly across San Francisco Bay to the Naval Air Station at Alameda, get down low and drag a grapnel to snag a line stretched across two uprights. To this line was attached a pouch holding written operating instructions from the Fleet Air Wing for whom the blimps worked. This was done in the

lower in scraped the runway, though never sufficiently to affect performance of its assigned mission.

The first "immediate superiors" in the chain of command under whom this early blimp unit worked were Captain John Dale Price, Commander Fleet Air Wing SIXT, and his Chief Staff SA Officer, Captain A. P. ("Putt") Storrs, both airplane men. Let it be recorded to the lasting credit of these two that their cooperation, consideration and assistance to this primitive, struggling airship squadron very materially ^{lightened} ~~lightened~~ the unusual burdens that beset these early airship men in the Pacific and greatly helped their morale under such trying circumstances.

As previously indicated, besides its airships, the Goodyear organization contributed a number of highly experienced airship men. Among that EM early contingent was Lieutenant John B. Ricker whose familiarity with lighter-than-air aircraft was invaluable in the erection of the TC-ships at Sunnyvale and in getting the L-ships into naval garb. But "Johnny" Ricker's outstanding experience in that squadron came with his assignment as skipper of the ex-Army TC-13 under the Navy's colors.

One morning late in March 1942, the TC-13 was detailed to meet the battleships PENNSYLVANIA and TENNESSEE at daybreak off the Farallone Islands and provide these ships with antisubmarine escort into San Francisco. At that time, as a result of the Japanese raid on Pearl Harbor, these two were the only usable battleships we had in the Pacific. Soon after eight o'clock, a TC-13 lookout reported sighting a periscope about 6,000 yards off the port bow

like a periscope "feather" was only a streak in the water created by a spar buoy stemming the current. The lookout, however, insisted he knew a periscope when he saw one, so Rieker put on top speed and headed for the spot. At the same time, he began sending a signal to a nearby destroyer to search the area beneath the airship with his sound detection gear.

Before that message got through, the periscope appeared again, this time directly below the IC-13. Surely, here was a submarine making an approach to attack the PENNSYLVANIA, and an ideal approach at that. As did the whole world, Rieker knew that only a month before a Jap submarine had brazenly sat on the surface and shelled oil field installations north of Santa Barbara. A quick check with his officers assured Rieker that no word had been received that any of our own subs were to be in that area. Johnny decided that action was demanded. Two depth charges plunged seaward from the blimp, and then another two.

About this time, a destroyer signalled that the sub was "friendly;" though its gestures certainly did not appear so. In three minutes, a submarine did break the surface and sure enough, it was one of our own. Meanwhile, both battleships had bent a hasty retreat. The submarine had been heading for the far Pacific on a war mission, but couldn't resist the opportunity for a training run. The blimp's depth charges had damaged his diving planes and knocked out a number of his instruments. This encounter required that he return to the Mare Island Navy Yard for repairs.

For a while, airships were not very popular in submarine circles out there. However, early in the official investigation, the sub skipper came over to Rieker, complimented him on his actions

were those who demanded that the airship skipper be court-martialed.

Captain John Dale Price expressed full approval of the blimps' action and said, in effect, that no one would do anything to Ricker without first doing something to Price. Ricker and the TC-13 had been fully justified in their attack. They had not been advised that any friendly underwater craft were to be present in the area. The official investigation cleared the airship and agreed its Captain had acted alertly and skilfully. Many others too, were most generous in their praise. You may be sure also, that the flow of necessary information was put in order, and that submarines were no longer permitted to use such areas for exercise purposes.

Meanwhile, the L-ships of SP-32 also had been busy, the L-8, for example, being assigned an operating base on Treasure Island (long known as "Goat Island") in San Francisco Bay. This base consisted simply of a mooring mast to which the blimp could tie up between jobs. The missions assigned this craft were varied. At times, they involved investigation of oil slicks on the sea, floating debris or other suspicious signs off San Francisco; at other times, the assignment was patrol of an area. On several occasions, the L-8's job was to carry Very Important Persons and officials on close aerial inspection of facilities, sites and what-not in the San Francisco, area.

Then one day came⁴⁷ a different job for the L-8. For security reasons, it was several years before the mystery surrounding this task was dissipated. On 11 April (1942), this airship was ordered to deliver 300 pounds of freight to the airplane carrier HORNET which had departed San Francisco that ~~was~~ forenoon. Overtaking the carrier off the Farallone Islands that afternoon.

the blimp's skipper saw the HORNET's deck crowded with B-25 airplanes which he took to be just another deckload being ferried further west. By means of a line about a hundred feet long, the crew of the hovering blimp lowered the 300 pounds of freight to waiting hands on a cleared spot on the carrier deck and then headed home. As later revealed, the HORNET was then setting out to launch Colonel "Jimmy" Doolittle's celebrated B-25 raid on Tokyo and other Japanese cities. The freight delivered by the L-8 had consisted of vitally needed parts for Doolittle's B-25's.

But the real riddle of the L-8 was to come some four months later, on the 16th of August. At 6:00 AM that day, the L-8 departed from Treasure Island for a patrol mission near the Farallones off the entrance to San Francisco Bay. Five hours later, the little craft drifted in from sea on the wind and floated gently to earth in a street in Daly City, 20 miles south of San Francisco. There was no one aboard the airship. It was in good condition, with no visible sign of trouble of any kind. No trace has ever been found of her crew. The known facts only deepen the mystery of their disappearance and the whole strange sequence of ~~xxx~~ related events.

Normally, in going to sea on such a mission, the L-8 would carry a crew of three, and a load of two depth bombs. On this occasion, however, because the heavy deposit of early ~~was~~ ^{had} morning dew on the ship's envelope had not yet evaporated, the crew consisted of only two. They were Lieutenant Ernest D. Cody and newly commissioned Ensign Charles E. Adams, formerly a chief petty officer, now making his first flight as an officer. Both Cody

Only a few years before, we had served together in the light & cruiser MILWAUKEE.

About two hours after take-off, Cody reported by radio that he was investigating an oil slick about five miles east of the Farallones. There were many oil slicks those days, so Cody's report was not regarded as anything particularly unusual. However, attempts to contact the L-8 by radio fifteen minutes later were unsuccessful, and the two planes sent out to investigate that silence did not choose to break through the low overcast to have a look at the surface of the sea. Soon after eleven, Fort Funston reported that an Army lookout had seen an airship touch down on the beach some two miles ^{away} and that two men had disembarked from the ship. So, ~~for~~ two or three hours after the L-8 was down in ^{Daly} ~~San Francisco~~ City, 2P-32 officers confidently expected that Cody and Adams would turn up and relate what had happened.

Upon learning that the L-8 had landed in Daly City, a salvage party from Moffett Field (Sunnyvale) hit the road at once and found her still in fair condition. The local Fire Department, however, had slashed the envelope to see if there was anyone inside and hence the ship was deflated. The airship's car was in good condition. One of the two bombs was missing. The radio was still operative. Both motors were stopped but the ignition switches were still on. Though bent, the damage to the propellers had not occurred while they were in rotation. The life jackets were missing but the rubber life raft was in place. The car had not been immersed in the sea. There was plenty of fuel on

went and the valves to the engines were open. There was no indication of fire. The confidential-documents folder was in order. The car door was open.

Many facts in connection with this baffling incident have been established. For example, when the L-8 was investigating the oil slick reported by Cody, there were several surface craft in the immediate vicinity including one from the Coast Guard, another from the Navy, and several fishing craft. They saw the blimp come down low, drop two smoke flares, then ascend into the overcast. There was no doubt in the minds of personnel aboard these surface vessels that the L-8 was under complete control at that time. In fact, one boat was so near that he scrambled to get clear, thinking the L-8 was about to drop bombs on the suspicious oil slick.

A transport which had just passed the Farallones and was standing into the channel for San Francisco saw the airship drop a flare and then come to a standstill over that marked spot just barely off the water. After about five minutes in that position, the blimp headed for the transport and circled him just above masthead height while trying to pass an oral message by means of the megaphone rigged beneath the airship's car. Believing the L-8 was trying to report contact with a submarine, the transport speeded^{up} and sent all hands to battle stations. In the ensuing noise and scurrying about aboard the transport, the airship's message never was received or understood. After several circles, the L-8 left the surface vessel, returned to the smoke flare at very low altitude, remained there a few minutes

About twenty minutes past ten, a Pan American Clipper sighted the airship. Ten minutes later, a Navy plane saw the L-S break out of the overcast at 2,000 feet and then descend into it again. Technical considerations make it appear that the airship was not then under human control. As the prevailing wind carried the derelict L-S towards the coast, it crossed the beach about a mile from Fort Funston. Two bathers saw the ship coming down and tried to seize its dangling lines. But when the ship struck the beach, one of the two bombs was ~~knocked~~ knocked off; ~~and~~ ^{the} lightened ^{the} blimp rose ~~again~~ again and drifted on until it landed in Daly City. The bathers clearly established that when the airship floated in from the sea, the engines were stopped, the car door was open, and there was no one on board. The Army sentry had mistaken the two bathers for the airship's crew. But it was not until mid-afternoon, after locating and questioning the two bathers, that ~~the~~ ^{the Adjutant General's} ~~Commander~~ ^{Commander} of ~~the~~ ^{the} ~~Golden Gate~~ ^{Golden Gate}, Lieut. Cmdr. Watson, ^{was} ~~was~~ convinced that Cody and Adams were missing.

Intensive and prolonged efforts were made to find and recover their bodies. South ~~of~~ ^{of} the ~~Golden Gate~~ ^{Golden Gate} is an extensive lee shore onto which the consistent north-west wind blows almost every loose object off the entrance to San Francisco. With the help of the Army, Coast Guard and local residents, a watch was kept for several months. Great masses of flotsam and jetsam, including many life jackets, binocular cases, papers, clothing and the like were painstakingly examined. There was never anything found that could possibly be associated with the two missing naval officers. They had in fact vanished without a trace.

The only acceptable theory is that their disappearance was unintentional and accidental. Had these men experienced mechanical or technical difficulties of any consequence during the flight, they surely could and would so have reported to their base. Except possibly for the stopped motors, there were absolutely no signs of trouble. One explanation advanced is that sometime during the flight, one of the men may have leaned out of the car, ~~is~~ lost his balance and fallen part way out. Then the other may have rushed to his assistance and in the recovery effort both may have fallen from the ship. The open door certainly seems to have been their point of exit. No further clues have ever come to light. In all probability, we shall never know with certainty just what happened. This strange story of the L-8 will probably remain one of the enigmas of the air age.

But this was not the end of the road for the former RANGER; as the L-8, her history was to end on a happier note. Trucked back to Moffett Field from Daly City, within two weeks the tough little ship was restored to full flight duty with its squadron, 22P-32, continuing there, until Armistice Day -- November the eleventh. Upon replacement by a new patrol airship of the K-class, the seasoned veteran L-8 trekked across the continent to Lakehurst, there to continue useful life as a primary trainer ~~as~~ for future airship crews, still faithful to the cause despite her tragic episode in the Pacific.

But the real riddle of the old RANGER, now the ~~FA~~ L-3,
to come some four months later, on 15 August. At 0600
that morning, this little airship ~~maxa~~ departed from its base
Treasure Island in San Francisco Bay and proceeded to sea for
patrol mission near the Farallone Islands off the entrance to
that famous bay.

Five hours later, the craft drifted in on the wind from
the north, and floated gently to earth in a street in Daly City, two
miles south of San Francisco. There was then no one aboard the
ship. It was in good condition, with no visible sign of trouble
of any kind. No trace of her crew has ever been found. The
facts only deepen the mystery of their disappearance and
the whole strange sequence of related events. *A. RICHMOND*

Normally, in going to sea on such a mission, the L-8 would carry a crew of three, and a load of two depth bombs. On this occasion, however, because ^{of} the weight of the heavy early morning dew on the ship's envelope which had not yet evaporated, the crew consisted of only two. They were Lieutenant Ernest D. Cody, USN, and newly commissioned Ensign Charles E. Adams, USN, formerly a chief petty officer, now making his first flight as an officer. Both Cody and Adams were experienced airship pilots. I knew Cody well; only a few years before, we had served together in the light cruiser MILWAUKEE.

About two hours after take-off, Cody reported by radio that he was investigating an oil slick about five miles east of the Farallones. There were many oil slicks those days, so Cody's report was not regarded as anything particularly unusual. However, when attempts to contact the L-8 by radio fifteen minutes later were unsuccessful, two planes were sent out to investigate that silence, but they did not choose to break through the low overcast to have a look beneath or at the surface of the sea. Soon after eleven, Fort Funston reported that an Army lookout had seen an airship touch down on the beach some two miles away, and also that two men had been seen to disembark from the ship. So, for two or three hours after the L-8 was down in Daly City, ZP-32 officers confidently expected that Cody and Adams would turn up and relate what had happened to them and their ship.

Upon learning that the L-8 had landed in Daly City, a salvage party from Moffett Field (Sunnyvale) hit the road at

loss of internal air pressure, the envelope was sagged on top at about mid-length upon landing in the street, and that was explainable. The local Fire Department, however, had slashed the envelope to see ~~it~~ if there was anyone inside, and hence the ship soon deflated. The airship's car was in good condition. One of the two bombs was missing. The radio was still operative. Both motors were stopped, but the ignition switches were still on. Though bent, the damage to the propellers had clearly not occurred while they were in rotation. The life jackets were missing but the rubber life raft was in place. The car had not been ^{com}inersed in the sea. There was plenty of fuel on board, and the valves to the engines were open. There was no indication of fire. The confidential-documents folder was in order. The car door was open.

Many facts in connection with this baffling incident have been established. For example, when the L-8 was investigating the oil slick reported by Cody, there were several surface craft in the immediate vicinity, including one from the Coast Guard, another from the Navy, and several fishing craft. They saw the blimp come down low, drop two smoke k flares, then ascend into the overcast. There was no doubt in the minds of personnel aboard these surface vessels, that the L-8 was under complete control at that time. In fact, one boat was so near that he scrambled to get clear, thinking the L-8 was about to drop bombs on the suspicious oil slick.

standing into the channel for San Francisco, saw the airship drop a flare and then come to a stand still just barely above the water over the marked spot. After about five minutes in that position, the blimp headed for the transport, circled him just above masthead height, and tried to pass ^a message by voice through the powered megaphone rigged beneath the airship's car. Believing the L-8 was trying to report contact with a submarine, the transport speeded up and sent all hands to battle stations. In the ensuing noisy scurrying about aboard the transport, the airship's message was never received or understood. After circling the transport several times, the L-8 left the surface vessel, returned to the smoke flare at very low altitude, remained there a few minutes, and then, at very slow forward speed, ascended into the overcast.

2 About twenty minutes past ten, a Pan American Clipper sighted the airship. Ten minutes later, a Navy plane saw the L-8 break out of the overcast at 2,000 feet and then descend into it again. Technical considerations make it appear that the airship was not then under human control. As the prevailing wind carried the derelict L-8 towards the coast, it crossed the beach about a mile from Fort Funston. Two bathers saw the ship coming down, and tried to seize its dangling lines. But when the airship struck the beach, one of the two bombs was knocked off; and so lightened, the blimp rose again and drifted on inshore until it landed in Daly City. The bathers clearly established that when the airship floated in from the sea, the engines were stopped, the car door was open, and there was no

the airship's crew. But it was not until mid-afternoon, after locating and questioning the two bathers, that the skipper of ZP-32 became convinced that Cody and Adams were indeed missing.

Intensive and prolonged efforts were carried out to find and recover their bodies. With the help of the Army, the Coast Guard and local residents, a watch was kept for several months along the extensive low shore south of the Golden Gate onto which the consistent northwest wind blows almost every ledge object off the harbor entrance. Painstaking examination was made of great masses of flotsam and jetsam, including many lifejackets, binocular cases, papers, clothing and the like. Never was anything found that could possibly be associated with the two missing naval officers. They had, in fact, vanished without a trace.

The only acceptable explanation is that their disappearance was unintentional and accidental. Had these men experienced mechanical or technical difficulties of any consequence during the flight, they surely could and would have so reported to their base. Except possibly for the stopped motors, there were absolutely no signs of trouble.

There is one conjecture or explanation held by other airship men then in the Squadron that seems the "least improbable" of all those advanced. By this theory, when the transport saw the blimp drop a flare and come to a standstill just barely above the water, one of the two blimp men had slipped out the open car door while leaning out for a closer inspection of the surface or perhaps of some exterior of the surface or perhaps of some exterior part of the airship itself.

Unable to haul his shipmate back aboard, the other airship pilot had then flown to the transport to try to get help. Failing in this, he

M- 11A

returned to the spot, came down almost to the surface and if
to grab his shipmate through the open door of the airship
slipped out and into the sea, leaving the abandoned blimp
float off gently by itself.

No further clues have ever come to light. It is not impro-
bable sort of ferocious sea life may have soon ended all chances
men ever being seen again, and it is highly improbable that
any one will ever know with any degree of certainty just what happened
to the crew of the RANGER will probably remain one of the enigmas
of the sea.

But this was not the end of the road for the RANGER. Tracked
to Moffett Field after landing crewless in the Daly City straits
two weeks the doughty little craft was restored to full duty
with the Patrol Squadron. Soon, however, new patrol ships of the K-class
were to reach ZP-32. On Armistice Day 11 November 1942, after
several flights, the L-8 was transferred to the training unit at
Moffett Field, there to continue useful life as a primary trainer
for patrol airship crews, still faithful to the cause despite her
episode in the Pacific off the Golden Gate.

On 12 March 1942, as the opening U-boat blitz along our Atlantic seaboard was about to enter its third month, the U.S. Navy nonrigid airship K-6 under command of Lieutenant George R. Lee was on patrol off the coast of New Jersey. The K-6 had been in the Navy less than three months, and was the most recent of four sister blimps comprising Airship Squadron TWELVE (2P-12) operating out of the Lakehurst Naval Air Station as its main base. In fact, the K-6 constituted one quarter of all the patrol type airships we then had, and the next, or fifth, was not to arrive from the builders until the end of April. The others ~~were~~^{are} order were even farther behind.

Just before noon, Lee received radio orders to search for a wreck reported to be a few miles southeasterly from Cape May. An hour and a half later, while investigating an oil slick three miles south of the wreck's reported position, the crew of the K-6 were suddenly startled by the sight of a submarine breaking the surface about 3,000 yards farther south. On up came the surprise guest until its main deck was some three feet above the water, and at its speed of perhaps less than two knots it appeared motionless. Directly in the glare of the sun, it was hard for the airship men to distinguish details, but it was clearly a good-sized submarine and definitely not one of our own.

Lee put on full power and headed the K-6 in for the attack. At the same time, he reported his contact to a Coast Guard cutter which was directly astern of him and on the opposite course. Then, just as suddenly as it had broken the surface, the sub submerged on the spot and was rapidly swallowed up by the sea.

On reaching the point of the stranger's disappearance, the K-6 dropped a "stick" of four 300-lb. depth bombs set to detonate at 25 feet below the surface. This bombing brought up no trace of oil or other visible results, so the spot was marked with smoke flares. When the Coast Guard cutter

reached the scene some twelve minutes later, he began dropping bombs or small depth charges on every smoke flare the airship would drop. Flashing light was the blimp's sole means of communicating with the cutter, and he couldn't seem to make the Coast Guardsman understand that a surfaced submarine had just been in that immediate vicinity, and after about 1600 the cutter departed from the area.

Lee had, of course, immediately reported the sighting to headquarters also, and was soon told that a destroyer was on the way to join him. For several hours, however, the destroyer mistakenly followed another airship which was heading up the coast away from the K-6 and the point of attack. Thus it was not until after 1900 that the destroyer (and a seagoing tug) reached the scene to pick up the search for the vanished U-boat.

At this period of the war, the K-6 still had not been equipped with either radar or the magnetic underwater detector, and now he had expended all his depth charges. So, after acquainting the destroyer with the situation, Lee ~~headed~~^{headed} back for Lakehurst. The ensuing search by the surface craft for the sub turned out to be fruitless.

That, however, is only part of the story.

The sub was the U-94, recently arrived off our Atlantic Coast, and no longer engaged in prowling close inshore in the hope of encountering passing shipping. After diving at daybreak, it had surfaced about half an hour later, only to submerge again in a couple of minutes upon sighting an airplane.

Underwater the boat continued listening for ship noises and coming to periscope depth about every hour for a look around. Several hours after checking the airplane, the U-94's hydrophone operator had reported that he heard propeller noises, and the captain, Oberleutnant Otto Ives, urged the sub to come to the surface to have a look. Unable to see anything, he decided to come

to the surface in the hope of there seeing what might be prospective targets for his torpedoes.

As the U-94 broke the surface, Ites and his senior chief petty officer leaped into the conning tower and began looking around. In a few seconds, they saw the airship bearing down upon them, and immediately crash-dived.

As the first depth charge from the blimp detonated, the U-boat was still in a crash dive and turning in the hope of so evading any succeeding bombs. As the explosion listed their boat, the crew thought their boat had been hit. ^{U-94} As a matter of fact, the conjecture amongst the U-boat crew was that the airship men had thought they had sunk the sub and were now off for home to reap an accolade. When the Chief Engineer of the U-94 called for damage reports, he was told that the port electric motor was stopped, the stern planes blocked, and the echo depth-gauge out of order. This was far from being critical damage, but now the boat came to rest on the bottom in relatively shallow water to clear the damage and then be off into deeper water. According to the U-boat's log, it was 54 minutes from the time of sighting the airship until the U-94 made off at high speed into deeper water. Nearly two hours later, the fleeing sub heard another depth charge go off, and an hour after that, propeller noises were no longer audible to them, indicating that the surface chase had been discontinued.

The U-boat did not continue its original mission of preying on our coastal shipping, but after a couple of days of observing the situation off New York, set off for his home base at St. Nazaire, France, on the northern part of the Bay of Biscay. Enroute, however, he came upon an Allied convoy on the high seas, and passed the word to some other U-boats

* Footnote: These details are from the account by the German naval journalist who was on board as a member of the U-94 crew.

which were standing by in that vicinity. These lurking subs attacked the convoy with some success, and in addition, one night Ives and his U-94 picked off four ships of the convoy, and subsequently he got two more from the dispersed remainder. While still at sea, the U-94 received news that her captain had been awarded the Knight's Cross of the Iron Cross; thereupon his crew, to show their admiration for their captain made up a temporary "ersatz" medal on board and presented it to Ives while still at sea. The formal presentation of the award was subsequently made by Grand Admiral Doenitz himself in Paris, not only for Ives' latest success but also for his extensive earlier submarine service.

Although these facts did not come to light until well after the war, they strongly corroborate our unreadiness for antisubmarine warfare as WW II closed in upon us.

Sad the K-6 been equipped with the airborne magnetic detector (MAD) as blimps subsequently were, the airship could very readily have pinpointed the submerging U-94 for the airship attack, as well as for definite location as it lay bottomed in shallow water. Furthermore, the K-6 would have had a good chance of tracking it magnetically/as it surfaced nearly an hour after the airship attack, into deeper water. But the sad facts are that the K-6 had not yet been equipped with even radar by which the U-94 could have been detected had it raised its periscope, as it undoubtedly did, during its escape to the high seas.

And just as reprehensible, tactical cooperation in such cases between airships and surface craft had not been satisfactorily worked out and promulgated. In fact, Captain Ives has advised the author that if the cooperation between surface craft and the blimp had been better, it would have been very much more difficult if not impossible for the U-94 to have worked its way out of the predicament.

The final official assessment of the K-6's attack: on 12 March was "insufficient evidence of damage," and this was the highest assessment that any previous attack in the Eastern Sea Frontier had been given. The first substantiated "kill" of a U-boat in ESF was that of the U-55 sunk by the U.S.S. ROPER, a destroyer, on 14 April, a month after the airship K-6 tangled with the U-94.

Thus, in retrospect from postwar information, it now appears highly probable that the airship K-6 inflicted the first damage upon an enemy submarine in U.S. waters in WW II. In fact, had it not been for long peacetime neglect of blimps, the K-6 might well have made the first "kill" in our waters, or at least have contributed importantly thereto.

Pyramiding of neglect has probably never been better expressed than in Benjamin Franklin's "For want of a nail a shoe was lost; for want of a shoe a horse was lost; for want of a horse, a rider was lost;" etc. But the case of the K-6 versus the U-94 was also a startling example of accumulated neglect. For want of a couple of airship items, a U-boat was NOT lost, and six or more badly needed merchant vessels and their cargoes were lost.

How was it our blimps were so very few in those crucial early days, and even those few so ill-equipped? That too, is an interesting ~~story~~ albeit not very complimentary story.

As background for appreciation of the part our blimps were able to play against U-boat penetration into the Frontiers to which airships were assigned, recapitulation of early U-boat plans and operations is essential. Of great value in this regard are the published memoirs of Grand Admiral Doenitz. Head of the German U-boat Command until January 1943, Doenitz was made Commander in Chief of the German Navy, but he continued his prime interest in submarine warfare throughout the war.

MEMOIRS, Ten Years and Twenty Days by Admiral Karl Doenitz
The World Publishing Company Cleveland and New York 1959.

A further important consideration is that the German High Command had no advance warning and hence were taken by surprise by the Japanese attack on Pearl Harbor on 7 December 1941. Therefore, there was not a single U-boat in American waters for another five weeks thereafter.

But even with such factors/in our favor, we were still unpardonably tardy in our airship preparedness.

When WW II started on 1 September 1939, a war in which Germany definitely hoped the United States would not participate, she had a total of 57 U-boats, seven of which had been commissioned only in the previous quarter. Eight boats were engaged in training and trials, leaving 49 in operational status. Twenty-five of these were the small 250-tonners, leaving only a couple dozen of the larger ocean-roaming type which carried the burden of the long-range undersea war. The years 1940 and 1941 were particularly bad ones for Great Britain in the U-boat warfare. The menace was so serious that Winston Churchill styled it the only thing that really frightened him during the war. British intelligence estimated that the Germans were operating at least 100 subs; Admiral Doenitz says Germany launched the battle of the Atlantic with only 22 ocean-going U-boats. However, Germany had an additional 61 U-boats in various stages of construction before 1 September 1939, all due for completion in 1940.

Twenty-eight months later, on 1 January 1942, or three weeks after the United States was openly at war with the Axis Powers, Germany still had an over-all total of only 91 operational underwater craft, of which some 33 were undergoing repairs in shipyards. Twenty-three others were in the Mediterranean, with three more under orders there. Six more were stationed defensively west of Gibraltar, and four similarly along the Norwegian coast. Of the 22 others at sea, about half were enroute to or from their operating areas. Hence, at the time, out of the 91 operational total, there were never more than 10 to 12 U-boats engaged against Allied shipping.

footnote: For further U-boat statistics see Appendix

The 13th of January was set for opening the surprise Pukenslag attacks, but on the 12th the U-123 heralded this new chapter by sinking the British steamer CYCLOPS about 300 miles east of Cape Cod. Two days later, off Nantucket and well within the Eastern Sea Frontier, the large Panamanian tanker NORNESS was torpedoed and sunk, and the show was on in earnest. Before the original five German subs left American waters, three more arrived off Chesapeake Bay to give continuity to the operation. Next, a Group was sent to the area south of Halifax, and from there, during the following weeks, pushed on as far south as New York and Cape Hatteras. By the end of April, the slaughter in our Eastern Sea Frontier alone had reached a total of 82 ships, at a cost to the enemy of only one U-boat.

The early U-boats in American waters quickly arrived at operating procedures adapted to the situation they found there. As a rule, they lay on the bottom in from 150 to 450 feet of water a few miles out from the shipping lanes by day, and after dark awaited on the surface to attack approaching ships. Occasionally, gunfire was used to finish off a slow sinker, and later in the Spring the subs sometimes attacked during daylight, both from submerged and surfaced positions.

Intent on full-scale capitalizing on our evident ASW weakness, on 25 January Admiral Doenitz ordered all newly finished and fitted-out U-boats to be sent with all dispatch to the American theater. However, just a few days later, the Naval High Command ordered him to send eight subs to operate defensively off the Norwegian coast, as Mitler then feared that an Allied attack would be made on Norway. Thus, as Doenitz relates, on 1 February, out of the 16 U-boats available for operations in the Atlantic, seven were defensively deployed off Norway, three similarly stationed west of Gibraltar, leaving only six for offensive work in American waters.

to complicate his situation further, Donitz so orders to have 20
subs in Norwegian waters by 15 February, on top of which a number were
to be altered structurally to permit their carrying supplies to the
German forces in Norway if needed. So, from the middle of March to the
end of April 1942, there were only six to eight U-boats available to an-
d onto the fruitful field in American coastal waters. Thus, we can be grate-
ful to this diversion of U-boats to Norway following Hitler's hunch, for
undoubtedly keeping a really bad enough massacre of our shipping from
becoming very much worse.

On 16 February, as planned, the four U-boats sent out in mid-January
began their Caribbean assault when the U-156 shelled an oil refinery at
Cuba. On the 18th, the U-161 sneaked into the Gulf of Paria and that
night torpedoed two ships anchored off Port of Spain. On the night of
19th March 19th, the same sub got into Castries Harbor, St. Lucia, and
torpedoed two ships alongside the dock. The U-129 operated successfully
far south as the coast of the Guianas. An added starter, the U-126,
trauding in March off the northeast stretch of the coast of Cuba sank
number of ships. This was only a taste of what Caribbean sniping was
on to suffer from the U-boats before the tide turned. It was to be
August before the first U-boat kill was made in this frontier.

The Gulf Sea Frontier got its first dose of undersea warfare on 15
February (1942) when the U-128 sank an American tanker off Cape Canaveral
out half way down the Florida east coast. Before the month was over,
three more ships were sunk in that very vicinity. But the really serious
losses in GSE were to begin to show when the Germans found the harvest
ESF drying up, largely from our inauguration of the convoy system, as
well as other improvements in our ASW capabilities. Nevertheless, Donitz

decided to use all U-boats becoming available from the east of April points on, for simultaneous action on several widely separated points off the American coast. This plan was greatly helped by the availability of the U-459, a refueling tanker submarine or "milch cow," late in April.

By early May, the tanker had refueled enough U-boats to enable Doenitz to set up a widespread operation in American waters. As he reports it, some 16 to 18 medium-sized boats were stationed between Cape Sable (southern tip of Nova Scotia) and Key West. Nine others were to operate in the shipping area between the Old Bahama Channel which separates the northern central coast of Cuba from the Great Bahama Bank, and Windward Passage which separates the east end of Cuba from Haiti or the Island of Hispaniola; in the Gulf of Mexico; to the south of Cuba as far as the Yucatan Straits; off Curacao, Aruba, and Trinidad; and off the Guiana coast. Sinkings off the east coast of the U.S. proper fell off very sharply at this time, so six U-boats from this sector were transferred to the Caribbean, and four additional boats on their way to U.S. waters also were shifted to the Caribbean. "Milch cow" tankers played an important part in the Caribbean operation, servicing 20 out of the 37 U-boats engaged in that area in the three months period ending in June.

In May (1942) in GSF alone forty-one ships, over half of them tankers, fell prey to U-boats. This was the largest number of sinkings in any area in any month of WW II. Numerous sinkings were made right off the shores of the Mississippi River, some even as far into the Gulf of Mexico as within 25 miles of its western-most coastline. For the month of May, the combined losses in GSF and the Caribbean amounted to 75 vessels in those waters alone. The first U-boat kill (of the three) made in the Gulf of Mexico was on 13 June. By July, the losses tapered off markedly, and by September there were very few. As a matter of fact, Admiral Boehm

states that by the end of June he realized that the main harvest in those waters had been reaped, and that the main U-boat warfare would now have to go back to wolf-pack attacks on convoys. Such wolf-pack ^{against Atlantic convoys} tactics/had been abandoned since January in favor of more profitable activities in American waters.

Even the Panama Sea Frontier, Atlantic side, had felt this tropical U-boat blitz beginning on the night of 9 June. By 2 July, the U-boats had their 14th victim in PSP. The threat ended eleven days later with the sinking of the U-153 by the destroyer LANSDOWNE.

Such were the situations in the Eastern, Gulf, Caribbean-West, and Panama Sea Frontiers in those early hectic months of Wü II. How blimps got into the ASW picture in those waters, and elsewhere, follows.

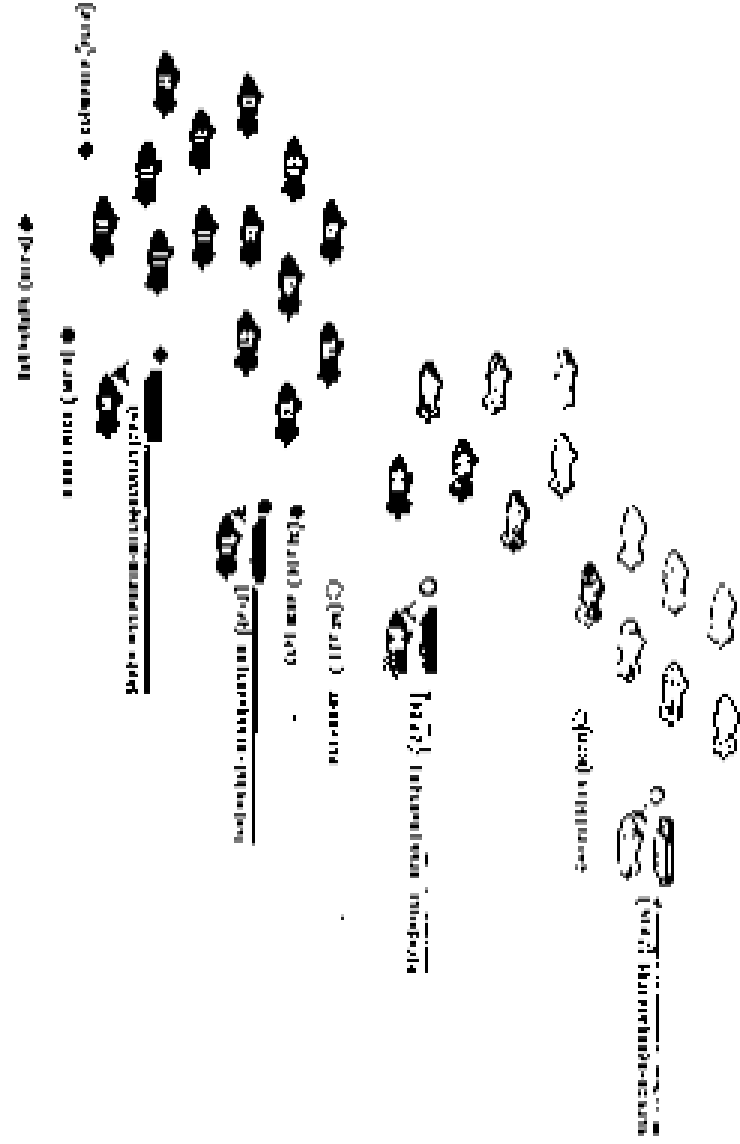
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 8

FLEET AIRSHIP WING ONE

(Four Blimp Squadrons)

Headquarters, Lakehurst, N. J.

100 ft. (30 m)  200 ft. (60 m) 



SQUADRONS

- ZP-11 8 airships
- ZP-12 8 airships
- ZP-24 8 airships
- ZP-05 8 airships

MAIN OPERATING BASE

- Naval Air Station, South Weymouth, Massachusetts
- Naval Air Station, Lakehurst, New Jersey
- Naval Air Station, Wakeville, North Carolina
- Naval Air Station, Glynnco, Georgia

Blessed with a wealth of seaports and flourishing, diversified industry along practically its entire length, the Eastern Sea Frontier (ESF) was clearly destined to be first to feel the impact of U-boat warfare in our home waters. ESF was a roughly rectangular strip of sea area, its westerly side being the coastline between Jacksonville, Florida, and the northeasterly point of the State of Maine. Some 250 miles wide at its northerly end and over 300 at its southerly, the seaward side of this wartime area was more than a thousand miles long. And its shipping lanes, like dense magnetic lines of force, were sure to attract the steel-bulleted underwater raiders of the Axis powers. Indeed, this undersea war of attrition on our shipping did begin in ESF, with the sinking of the large tanker **NORNESS** of Panamanian registry on 14 January 1942, about 60 miles southeast of Montauk Point, Long Island.

That the northern part of ESF was also the scene of our initial World War II airship activities and the Lakehurst (N.J.) Naval Air Station the main base for them, might, at first glance, seem to reflect real prescience on the Navy's part. Actually, it was nothing of the sort, but rather the fortuitous outcome of continued Departmental indifference and indecision in airship matters prolonged up to the very brink of war. Specifically, that Departmental situation traces back to the naval airplane organization which officially had cognizance over airship matters also. The simple fact is that when the expected U-boat scourge struck, Lakehurst was still the only airship base we possessed, and our four lonely patrol type airships had no

On the other side of the coin, credit for whatever readiness that

small airship contingent possessed accrues to the non-aviator, line officer Commandants of the Third and Fourth Naval Districts (headquarters at New York and Philadelphia respectively) and to the handful of airship officers at Lakehurst and in the Department. They were about the only ones who had given any previous thought to employment of blimps in wartime.

For quite some time before the President on 8 September 1939 declared the existence of a "limited national emergency", airship personnel at Lakehurst and in the Bureau of Aeronautics had tried hard and continuously, but to no avail, to get the Navy Department to set and carry out a live policy with respect to airships. Now that the Presidential declaration pointed vividly to more than a mere possibility of war, airship men renewed the pressure for some definitive airship policy, and tried again for the always-denied permission even just to practice dropping bombs and firing guns from airships.

The first faint break came when on 18 September (1939), the Chief of Naval Operations wrote the Third and Fourth Naval Districts outlining plans for providing suitable forces for "neutrality" functions in their Districts, and mentioning the availability therein of four (already obsolete) blimps at Lakehurst. Less than a month later, the General Board reaffirmed its 1937 airship policy, which, in part, modestly called for construction of two new blimps a year. But even this did not break the airship impasse in Washington. Nevertheless, Lakehurst officers and the nearby District Commandants carried on their conferences in all seriousness, which, for the first time

In June 1940, the 10,000 Plane Program which included 48 blimps became law. But it was late October before even the first four of the 48 were contracted for, even though the prototype K-2 had been delivered on 16 December 1938. Thus, a year after declaration of the limited emergency, Lakehurst still had only the old ex-Army TC-13 and TC-14, the small training ships G-1 and L-1, and the single new prototype K-2.

During the months and years of Departmental vacillation on blimp matters, Lakehurst officers, on their own, had sought out blimp exercises and work aimed at developing tactics and at training personnel for anticipated wartime employment. With the hearty cooperation and genuine appreciation of submarine officers at the New London sub base, blimps did a lot of work in tracking and recovery of exercise torpedoes fired by submarines, plus other helpful work the submarines wished them to do. Similarly, Lakehurst sent out blimps to pick up merchant vessels at sea and remain with them for extended periods simulating wartime escort missions. On its own, Lakehurst carried on blimp gunnery experiments and bombing exercises (perforce with miniature bombs). Yet, as airship officers continued to point out to the Department, there were still in existence no airship tactical manual, no training procedures, and no planned coordination with other branches of the service, all of which were matters which should have originated in the Department as they did for all other types and weapons.

By mid-April 1941, scheduled daily operations were begun by the motley array of obsolete Lakehurst blimps simulating wartime missions. Then on 17 September the K-8 arrived first production ship of the K-series. On

December. Bad weather caused postponement of the exercise until the 8th, but ^{that} of course was the day after the Japanese attacked Pearl Harbor and the blimp exercise never came off.

2

On January 1942, Rear Admiral Adolphus Andrews ~~USN~~, Commander

of the Frontier, carried out orders to commission Airship Patrol Group

ONE with headquarters at Lakehurst, ^{the command of the Group being} ~~on the same occasion~~ ~~assigned to~~ ~~Patrol~~

~~Squadron~~ ^{Force} wisely placed in the competent hands of Captain

George H. Mills ~~USN~~, who had commanded Lakehurst since January 1940,

and had masterminded the farseeing "do it yourself" efforts to get blimps

and their crews ready for wartime work. "Shorty" Mills was also a survivor

of the rigid airship MACON, and brought to airships the excellent qualifications

of an experienced seagoing line officer as well. Subsequently he moved up to

command of Fleet Airships Atlantic, with the rank of commodore. His leader-

ship in the Fleet airship organization was both efficient and inspiring, particu-

larly in those dark early days when U-boats ran rampant along our eastern

seaboard and Mills had so little to work with.

Command of this first Airship Patrol Squadron, ZP-12, was placed

in the able hands of Lieutenant Commander Raymond F. Tyler, USN, "Ty"

was not only an enthusiastic, competent airshipper but also an inspiring,

hard working leader, and later, as a Captain, moved up to command of

Fleet Airship Wing ONE, one of the busiest units in the whole organization.

Upon commissioning, ZP-12 consisted only of the K-3, K-4, K-5 and K-6.

It was busy before ZP-12 got its fifth airship, and July 1943 before it got

footnote

its full quota of eight.

EASTERN SCHEDULE FROM JUNE

1942

J	F	M	A	M	J	A	E	O	N	D
V	R	V	P	V	U	U	U	X	C	E
M	B	B	R	H	Y	H	L	C	P	V
14	17	28	23	5	13	3	0	0	0	0

4	4	4	4	4	5	8	8	10	12	13	13	13
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	1	1	1	1	1	2	2	3
4	4	4	4	5	6	6	7	7	9	6	7	6
0	0	0	0	0	1	1	2	2	2	3	3	4

1941

30	31	29	32	30	28	29	28	30	29	29
6	7	6	8	8	8	8	7	8	8	6
9	7	7	8	8	8	6	6	6	6	6
8	8	8	8	8	7	8	8	8	8	9
7	9	8	8	6	7	7	7	8	7	8
0	0	0	1	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0

1943

J	F	M	A	M	J	A	S	O	N	D	
V	E	V	P	V	U	U	U	U	X	C	
N	B	R	U	Y	H	L	G	P	V	C	
16	17	21	21	21	23	28	27	28	27	26	29
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	1	1	0	0	0	0	0
4	4	5	6	7	6	7	6	6	6	6	6
4	7	7	7	7	8	8	8	8	9	7	8
0	1	3	3	4	5	6	6	6	5	6	7

1942

26	26	28	28	27
7	6	6	6	5
6	6	6	5	6
6	7	8	9	8
7	7	8	8	8
0	0	0	0	1
0	0	0	2	1

NOTE

Airline per month
shown to nearest whole number

1943

Airline per month shown to nearest whole number

U-boats withdrew from their initial blitz in ESF, there were only eight airships in that Frontier. The last five months of 1942, however, went by with neither U-boat nor merchant losses, giving totals for the year of four U-boats and 103 merchantmen sunk in ESF. At the end of 1942, Commodore Mills still had a total of only thirteen blimps. His fourth squadron, ZP-15, basing at Glynco, Georgia, was not commissioned until 1 February 1943.

ZP-12 put in a very active year of 1942. ~~It~~ ^{was} very first operational mission was flown on 3 January when the K-4 piloted by Lieutenant Walter H. Keen, USN, and the K-5 under Lieutenant (jg) Robert J. Antrim, USN, escorted a convoy of thirteen naval vessels from Eatnegat Lightship to Five Fathom Bank, ~~off the coast of~~ ^{off the coast of} ~~the~~ ^{the} ~~North~~ ^{North} ~~Carolina~~ ^{Carolina}. With never more than nine airships and an average of less than six, this Squadron made 865 flights for 12, 120 hours, of which 693 flights were Escort and Patrol missions. ZP-12 flew on 93% of the calendar days of 1942, and on only one occasion was it hangar-bound. That came from having ^{had} to put eight ships in a hangar intended for only seven, for under the wind conditions that day, the eighth ship blocked the maneuvering room necessary for unhooking. In eleven months of 1942, the K-3, first of the production ships, put in 2410 hours of flight time.

That first year, and particularly its first six months, was a heart-breaker for our new airship organization. The few airships we had were meagerly equipped. Some lacked both MAD and radar. MAD, far from being a perfected practical device that could be operated by average flight

personnel, was still in the hands of the scientists whom we began its application to blimps. For many months, civilian scientists rode the blimps and operated the MAD gear on actual ASW missions while working the bugs out of it.

Airship radar had an almost parallel history.

But even such troubles were topped off by the fact that of all the bombs dropped by ZP-12 in 1942 TWENTY-TWO percent were duds:^{#footnote}

From the long list of ASW activities and incidents in which airships of KING ONE participated-- a list far too long for this volume-- a few representative examples have been selected to indicate the general status of ASW in those days and how blimps (then operated in this field.

Even before ZP-12 began its operations, blimps attached to the Lakehurst station were out on ASW patrol. For example, on 22 December the K-3 while operating about thirty-five miles off the entrance to Buzzards Bay sighted a distinct wake and rising oil extending in a north-south direction, with what appeared to be a black object at one end. The oil globules seemed to appear from beneath the surface, and had not had time to spread. The visibility was thirty miles and no surface ship could possibly have caused the wake or the oil spots. As the airship watched, the wake came to a stop and the oil particles began to spread. The K-3 dropped one bomb and saw oil spots appear after the explosion. A second bomb brought no further visible evidence, but about half an hour later fresh oil spots were sighted headed seaward along a track of about 500 yards. At dusk the K-3 discontinued the search. This was the first bomb bobbing by an airship in the war.

#footnote: In late January (1942), the U-Boat Command noted in its diary that early U-boats operating off our coast experienced a number of faulty torpedo shots.

The records do not show any enemy submarine in our waters during that period, but two other noteworthy incidents occurred soon thereafter and have a suspicious connotation to them. On/December, the Coast Guard reported the sighting of a periscope in Portland Channel. Just a few weeks later (7 January 1942), an Army plane reported a large black submarine with a long conning tower and a gun forward, on the surface and moving slowly northeast, at a point about 48 miles east by south from Kontak Point. Together with the blimp incident on 22 December, there could possibly be a basis for speculating that despite our ~~not being a~~

~~bellyflop in the water at that time~~, we may have had an ^{oceanic} underwater Axis spy snoop in our waters taking a general look at our shipping situation.

On 14 January, while escorting a convoy, the K-3, piloted by Lieut. Keen made the first positive U-boat contact along a shipping route in ESP. It was also the first airship MAD contact of the war, and was within the screen of the convoy. The blimp marked the point of contact with a flare, the convoy maneuvered clear of the point, and a destroyer of the screening force depth-charged the area around the marker. No visible results were observed and the convoy proceeded safely.

On 16 January, in the late afternoon, the K-6 piloted by Lieutenant D.L. Cordiner, USN, surprised a black ^{#1 footnote} ~~black~~ midget-bulld submarine on the surface with three men on deck, off Barnegat Light, headed south, and about 3000 yards away. As the K-6 headed for the sub, it submerged hastily, and the whitecaps from a 30-knot wind quickly obliterated all ^{traces} ~~signs~~ of it. Nevertheless,

#1 footnote: Originally this was thought to have been an Italian sub, but the records do not show any in these waters.

footnote: There were eight vessels at various positions along the sea lanes within sight of the airship at that moment.

joined in the search and shipping was alerted. The K-3 made MAD contact within two miles of the point of originally sighting and began tracking. ^{But within} the blimp was about ready to attack, a merchantman steamed right through the search area and broke it up. Then the K-3's MAD power supply failed, and the radar too began functioning erratically because of low voltage. Such were some of the manifestations of undeveloped materiel that arose to plague our early efforts.

On 18 January, while enroute to join a convoy, 18 miles east of Lavallette, N. J., Lieutenant Keen in the K-3 made ^{and} MAD contact some three miles from the rendezvous point at about daybreak. Immediately afterward, a submarine started to surface but cleared only part of the conning tower before crash-diving. The sub was inside the airship's turning circle, but the blimp turned sharply, trailed and attacked. The bomb was a dud and the markers worked unsatisfactorily. Two more bombs were dropped, one of them a dud. Early that afternoon, the K-3 resumed the search and was joined by the K-4, Navy planes, and a Coast Guard Cutter. The quarry had escaped, however.

On 22 January, three ships of ZP-12 participated in a situation unparalleled in the rest of the war. It began that day just before sunrise as the K-5 under command of Lieutenant C. H. Becker, USN, sighted a large oil slick about fifteen miles east of Atlantic City. The blimp traced the slick, and at its northerly end came upon a large perfect circle of black substance with sticks and debris within it. White and green buoys rose to the surface around the edge of the black circle, giving suspicion ^{of} the presence of a submarine.

practically as it had reached the surface from a sub below. About three hours later when the K-5 was about a mile from the black circle, a large turbulent area of foaming water was seen at the original position of the circle. Then in the center of this disturbance, two submarines emerged, about 50 feet apart, and were clearly seen by all the airship crew. In about ten seconds, both subs crash-dived, leaving two heavy black streaks similar to the first one sighted. The K-5 dropped three bombs across their course, but with no evidence of damage to the subs.

An Army bomber arrived shortly, more bubbles were observed, and the blimp dropped his fourth bomb. Then the plane attacked. In another hour, the K-3 arrived and searched the area. A strong MAD signal was verified several times but as the K-3 prepared to bomb the contact, a fishing vessel moved in close and stopped, and had to be run out of the area. After getting new contacts, the K-3 bombed with three bombs, bringing up large air bubbles. Then the K-4 bombed, followed by an attack by two ~~OS2-U~~^{AP} planes. The K-4's second bomb brought up a life ring, several pieces of plank and considerable oil. Then destroyers dropped eight charges, followed by another eight, and then six more. Presumably, however, the two subs made their getaway. An incidental feature was that while the K-4 was enroute to the scene, it investigated a suspicious, unidentifiable fishing smack some ten miles northeast of Atlantic City headed in. On its deck were some sixteen metal drums commonly used for carrying fuel oil. What connection the two fishing vessels had, if any, with the subs is still in the realm of mystery.

st airplane rescue operation of the navy in World War II was
plished. Acting upon the indications of the presence of an enemy
the vicinity of Nantucket Lightship on 14 January, early the next
ing the K-3 under command of Lieutenant (jg) Lawrence P. Furey
took off from Lakehurst to run an antisubmarine patrol in the su-
area. Shortly after dawn, after being buzzed by an airplane,
low followed the plane and soon the airplane lookout sighted what
ed to be a small sailboat and then a large oil slick. The "sailbo-
out to be a small section of the bow of a ship whose stern was
g on the bottom. Search for survivors led to finding a raft with
board, four miles from the wreck. Flying low over the raft and
nd, through verbal exchange, despite language difficulties, air-
mel got the words "NO-NESS", "sub-marine", and "Norwegian."
facts were quickly relayed to Lakehurst while hot coffee, soup,
iches, cigarettes and matches were lowered to the survivors on
Further search revealed no more survivors, and that afternoon
e craft arrived and picked up the four men.

In ESP, besides the January 1942 attacks enumerated, airships made numerous other attacks on varying amounts of evidence of U-boat presence.

Commander Mills, Commander Fleet Airships Atlantic, required firm substantiation of contact reports by his airships, particularly in view of the early rash of nonsensical and often ridiculous reports of submarine sightings by other ASW craft. In retrospect, our airships conceivably could have, but for Mill's intentionally high standards, legitimately ^{claimed} more than they did. On five different early occasions, blimps in ESP definitely sighted periscopes and attacked or directed other craft to the scene. On one such occasion in late afternoon, the blimp's MAD was inoperative and it could make no satisfactory contact for bombing. Two airplanes which had been summoned, turned back because of poor visibility, but the airship remained at the scene until after dark.

On 3 July, while escorting a northbound convoy off Mantoloking, New Jersey, the K-3 piloted by Lieutenant A. L. Cope, USN, noted several Navy planes diving and dropping flares a mile and a half to the eastward. The Z-3 and a Patrol Ship's escort headed for the point which a plane had just bombed. The airship made several MAD passes over fresh bubbling oil spots and streaks, and marked the best MAD indications. All ASW craft on the scene reported to the K-3 for instructions. Four planes exhausted their bombs and made off. The PC boat dropped several depth charges, and the K-3 one, which proved to be a dud. Bomb repeated, and this time the blimp's bombs detonated. Relief planes arrived and bombed spots marked by airship flares. For about fifteen seconds, men in the K-3 believed they sighted the feather of a periscope. Because of cloudiness, the planes were ordered to leave. The PC boat and the K-3 had exhausted their bombs. Having moved out of the immediate spot to permit planes to bomb, the airship was unable to reestablish the contact, and the meantime darkness had set in.

On 17 July, Ensign Peter I. Culbertson, USNR, pilot of the faithful K-3, saw a member of EP-14, while investigating an oil slick, sighted a submerged

either at rest or moving very slowly. One bomb from the blimp was a dud, but the other two detonated, with an increase of light oil or gasoline appearing on the surface. The K-3 then dropped flares to mark the spot for an Army bomber which had arrived on the scene, but the oil on the surface ignited and delayed the attack. Soon patrol boats and trawlers arrived, as well as five different types of planes. Ontrawler reported a sound contact verifying the airship's visual and instrumental diagnosis. From there on, the operation was turned over to surface craft and planes.

Altogether, in 1942, blimps of GP-12 made thirty attacks on sighted or indicated contacts. They participated in many others made by planes and surface craft, sometimes directing the action, frequently making underwater observations with MAD. Numerous magnetic contacts ^{or} proved to be wrecks, since entry of wreck locations on navigational charts ^{is} logged considerably, particularly early in the war. Yet some of these contacts may have been U-boats deliberately flying on the bottom, hoping to be taken for wrecks.

Between the middle of July 1942 and June 1943, not another U-boat was sunk in ESP, mainly because they had vacated that area. On 2 June 1943, the U-521 was sunk by U. S. Patrol chaser no. 565. Then no more subs were sunk in ESP until 16 April 1944, when three Escort Destroyers (DEs) ^{of} sank the U-550. That was the last until 6 May 1945, when the U-853 ^{of} fell prey to a murderous assault by sea and air, making the total number of U-boats sunk in ESP during the entire war only seven. Airship attacks in ESP fell off correspondingly to fifteen in 1943, six in 1944, and five in 1945. There was a ^{great} ^{of} scarcity of targets.

Sinkings of merchantmen ^{also} fell off correspondingly. From 1 st August 1942 to April 1943, there were none. May, June, and July of 1943 saw one each, with another in December. The year 1944 saw one in April, another in November.

Footnote: The part played by blimps in this attack is related in Chapter ^{on} ^{the} ^{subject}

April 1945 saw two, May but one. Whereas there had been 203 merchantmen lost in ESF up to the end of July 1942, thereafter, for the entire remainder of the war, only nine more were sunk by U-boats. Our increased ASW strength was making itself felt not only as an on-the-spot deterrent, but also as a persuasive reason for not sending many U-boats back over here.

In early June 1942, ZP-11 and ZP-14 were added to the ESF blimp contingent. ZP-11 borrowed the X-3 from the Lakehurst squadron for commissioning ceremonies, and did not get its own first ship, the X-11, until 17 September. ZP-14 was commissioned with only one airship, the X-6, which arrived that very day and was out bombing aircraft contact the very next day. By the end of the year, one of those squadrons had four ships, the other three; neither got its full quota of eight until practically 1944. For five months ZP-14's ships operated solely from mooring nests while awaiting readiness of a hanger. The main U-boat drive was practically over by the time ZP-11 and ZP-14 came into being, but both had histories paralleling that of ZP-12, filled with attacks, rescue and utility missions. Both were efficient units of the helium curtain as gradually lowered on enemy subs in ESF and ^{the only} protected so many ships in ^{the} contact. ZP-14 was selected to go to duty in the Mediterranean, and thereupon ZP-24, which originally based at Hitchcock, Texas, for duty in the Gulf of Mexico, replaced ZP-14 at Rockville.

The fourth squadron of ESF blimps was ZP-15, ^{the first} based at Glynn, Georgia. ZP-15 was not commissioned until 1 February 1943, and then with only one blimp. It did not get its full quota of eight ^{airships} until April 1944.

Footnote: ZP-11 was initially commanded by Lieut. Comdr. Samuel M. Bailey, USN, and ZP-14 by Lieut. Comdr. Wm. A. Cockell, USN.
 Footnote: See Chapter NIGHT WATCH AT GIBRALTAR.
 Footnote: Initially commanded by Comdr. John D. Rapp, USN.

Few persons realize the vast amount of detail required in the supervision and handling of large convoys of men and goods across oceans, at points of arrival and departure both. Our District Operations and Shipping Control Officers were truly unusual geniuses, and so smoothly did they function generally, that even such of the Navy failed to appreciate the many and varied problems involved in such shipping control. For one thing, wartime radio silence greatly complicated communications with the many units involved, ^{or} difficulty which blimps helped greatly to resolve. By delivery of routing instructions visually, verbally and by message drops, blimps made possible the rendezvous of shipping as far as 90 miles from port, where previously such jobs had been done laboriously by surface craft only 15 miles out. Where used to direct and facilitate formation of convoys and rendezvous, airships commonly saved as much as 12 hours per convoy.

Similar use of airships for convoy control and supervision saved many days of shipping time in directing outside convoy break-offs and junction of individual ships with scheduled convoys, thereby eliminating the necessity of bringing such craft into congested harbors to await later sailings. The Fifth Naval District provided a good example in its supervision of shipping from the Delaware Capes to South Carolina. Large convoys sailed from Hampton Roads and others came in there to join up with coastal convoys running from New York to Key West, New York to Guantanamo, New York to Aruba, and vice versa. The problem was to detach the Hampton Roads section of arriving convoys about 20 miles east of the Cape and escort them in, and also to escort sections out of Hampton Roads to join up with the main convoys about 80 miles east of the Capes. This required close timing, and due to rough and hazy weather, at times it was easy for these sections to get lost and not make the junction ^{the} or delay the main convoys considerably. Blimps were found of "inestimable value" in spotting the convoys and directing the sections to junction with them, and also in directing escorts to main convoys for detaching the Norfolk section. ~~Not infrequently~~

Not infrequently, blimps would scatter coastal patrol

small yachts used by the Navy as anti-submarine lookouts, and often there was no word as to whether some had lost their bearings or had foundered. Blimps were often detailed to search for and report such craft, and often had to advise them of their true positions and guide them to port or to their intended positions.

A classic example of blimp "blipping control" occurred early in the war. On the morning of 9 June 1942, the K-3 was proceeding from its base at South Weymouth on an anti-submarine mission. Through his binoculars, the blimp skipper was watching a distant convoy coming over the horizon, when suddenly he saw a large column of water arise from the bow of the last ship in the convoy. Judging it to be a torpedo explosion, he headed at top speed for the scene and sent a plain language radio report to his base requesting support. Almost immediately there was a second explosion at the same ship. The K-3 soon reached the damaged Norwegian S. S. KRONPRINSEN, a large freighter loaded with Army cars and trucks, and one of an eastbound convoy of thirteen ships. As the K-3 reached the scene, the KRONPRINSEN was slightly down by the bow and her crew was abandoning ship.

The blimp carried on a submarine search until a British destroyer and two ^{LC} cutters arrived and began an intensive sound search of the area. By then, although her stern was almost blown off, the freighter had stopped settling. After surveying the situation, the K-3's skipper decided that salvage was possible, advised the interested parties accordingly, and asked that a tug be sent out. The surface support commander then instructed the airship to direct the crew of the KRONPRINSEN to return to their ship. Upon boarding their stricken vessel, they got up steam and set up communications with the airship by visual signals. Surface help arrived, took the KRONPRINSEN in tow, and headed for a Nova Scotian port. Two facts in connection with this incident are noteworthy.

and had only been borrowed from the still short-handed Lakehurst squadron ZP-12. Next, the skipper of the K-3 on this flight was a regular naval officer with a seagoing background, Lieutenant W. R. Feiler, ^{Decker, USN,}

On 3 December 1942, the K-10 exercised still another example of "chipping control," when the airship came upon the unescorted British merchantman BOLTONHALL proceeding on a course which would have failed to clear the Mine field off Cay² Hatteras. Signalling the merchantmen to change course, the airship then escorted it safely past the minefield.

Rescue effected by blimps during World War II were both numerous and so generally outstanding as to make it difficult to single out particular cases for the telling in this volume. However, a few are given by way of illustration in the accounts of blimp activities in each of the Sea Frontiers where airships were stationed. That of the K-3 and the KORMESS already related, was the first in the entire blimp organization, ^{but} and only one of the many carried out by ZP-12.

On 9 July 1942, the blimp K-8 commanded by Ensign G. S. Middleton, USNR, was ordered out from Elizabeth City, N.C. to assist in the search for survivors of a U-boat known to have been destroyed two days before but still unlocated by other searchers. While examining a probable area, the crew of the K-8 spotted an oily object in the sea which proved to be a man vaving to attract attention. While circling, the airship found three more bearded, oil-soaked, sunbaked survivors and dropped them a life raft. Then food, first-aid kit, and a knife were lowered in a rubber bag to the four survivors who had inflated and crawled aboard the raft. Keeping one eye on the raft while continuing the search, the blimp crew spotted three more survivors. Meanwhile, a Coast Guard flying boat, piloted by ~~Commander~~ ^{Admiral} Richard F. Burke, U.S.C.G. and ~~leading~~ to the scene on radio signals sent out by the blimp, arrived in a few minutes. Guided by smoke flares dropped by the K-8, the flying boat landed on the sea and soon ^{footnote} picked up all the survivors of the U-boat.

Upon questioning, ~~664141~~ the Germans stated that airplanes had flown over frequently without sighting them because of the rough sea.

While on a mission out of Lakehurst on 15 July 1942, the X-9 was instructed by the Eastern Sea Frontier to investigate a report that survivors of a torpedoed ship were in the area. Then another message was received from an airplane which said it was circling survivors and requested assistance. At almost the same moment, the ship picked up the reporting plane on its radar, Lieut. Cmdr. R. P. Tyler in the K-9 headed for it and soon saw the two small boats. Because of dwindling fuel, the plane had to depart, but Tyler remained at the scene in the K-9, reporting his position and asking for surface rescue craft. As the ship flew low over them, survivors shouted they were from the S. S. ~~WILCOX~~ and had been adrift for 13 days. Food and first aid supplies were lowered to these starving men who were eventually picked up by a PC boat.

While on a convoy escort mission on 1 October 1943, the K-59 (OPZP-14) commanded by Ensign Walter Sjerve, USNR, sighted an object on the water several hundred yards away, and as the ship turned to investigate, another object was sighted. The first proved to be a raft with ten men clinging to it, and the second was a series of three rafts lashed together, with twenty-six men aboard. Sjerve immediately notified his base while continuing to search the immediate for additional survivors. When surface craft arrived, the X-59 directed rescue operations until all had been safely taken out of the water. The survivors were three officers and thirty-three enlisted men of the sunken Coast Guard Cutter WILCOX which had foundered in heavy seas the night before.

Three airplanes of EP-14, the K-52 under Ensign F. J. Hubber, USNR, the K-72 under Lieut. John March, USNR, and the K-76 under Lieut. David T. Breault, USN, were dispatched by EP-14 on 5 December 1943 to conduct an antisubmarine patrol
of

North Carolina Coast. The K-82 got first results by sighting two men in lifejackets clinging to planks. About five miles from this scene, the K-72 came upon two rafts each holding six men. The K-76 continued the search throughout the night, and on the morning of the 5th, found a capsized lifeboat with four men on it. In each instance, the blimps radioed in their findings and then hoisted ^C surface craft to the survivors. They were members of the crew of the torpedoed Cuban freighter LIBERTAD.

On 7 January 1944, the K-81, commanded by Ensign E. E. DeVore, USNR, located twenty-one bodies from the crew of the U. S. S. St. AUGUSTINE which had sunk after collision with a U. E. tanker 63 miles southeast of Cape May, N.J., the night before, and guided surface craft to the bodies.

In still another form of disaster follow-up, on 10 April 1944, the K-9 of ZP-11 and the G-8 of ZJ-1 sighted two men in rafts and a third in a life jacket, survivors of a mid-air collision of two airplanes. The airships then served as markers to guide surface craft to the men in the water.

FOR SOON WE FORGET

A HISTORY OF
UNITED STATES NAVY AIRSHIPS
IN WORLD WAR II

Dedicated gratefully to the Airship Officers,
Enlisted Personnel and others of the United
States Navy who served their Country so loyally
and efficiently in Airships in World War II

By

Vice Admiral C. S. Rosendahl

U. S. Navy Retired

NO. BOX 2 10-10-1942

Strange, perhaps, but few people have an adequate concept of the vast and varied effort required during great conflicts such as World Wars I and II to insure that our combat forces particularly, wherever they may be, are kept continuously supplied with all the tools of war, arms, ammunition, and the many items needed to sustain as well as take lives. There must also be adequate transportation to move manpower in great numbers or small, and their material requirements safely to wherever they may be required.

Whereas nature originally blessed our nation with bounteous and varied raw materials, we have nevertheless been dependent upon foreign sources for many basic items necessary to sustain our own ^{Even in ~~production~~ but the war ~~self-sufficiency~~} needs and those of our allies. A great many items for processing and then passing on as finished products, have required the medium of seagoing transportation. ^{The world's dependence upon ~~such shipping~~} This provided an enemy with an invaluable trump card if he could molest and cripple such shipping.

Our WW II enemy did possess and make prolific use of such harassment means. Thus the protection of shipping was a matter of utmost priority, and it was in such protective service that our U.S. Navy Airship activities shone primarily. But that work of our airships was mainly out-of-sight, non-glamorous, humdrum drudgery, with few spectators, no cheering sections. Newsmen writing stories for the folks back home chose what they considered topics of more "human interest." Almost no one, even in the Navy, realized the importance of this activity, or gave it much thought. The exceptions were primarily those of the airship organization itself and the cognizant Sea Frontier authorities, plus any others for whom airships happened to work directly.

On the other hand, as will be subsequently related herein, there

was in particular one indispensable class of beneficiaries who were ^{truly} genuinely appreciative of airship services, and gratefully acknowledged it.

It is thus the author's hope that this volume will help set the record straight as to the contributions made by our naval airships in World War II.

The period covered herein begins at a point sufficiently PRIOR to the emergence of the United States on 7 December 1941 as a clear-cut, no-longer camouflaged belligerent, to account for the readiness, or otherwise, of our airships for WW II. It extends statistically through 15 May 1945 for those airships operating in the Atlantic theatre of the war, and through 31 August 1945 for those in the Pacific. These represent the dates by which airship squadrons terminated their antisubmarine activities in those two general areas.

However, just as it has been necessary to comment on the PRE-war airship situation, it is similarly essential to ^{note} ~~bring out~~ the evolving trends which surfaced during the war, to indicate the POST-war ~~continuum~~ prospects for such craft.

The airships involved herein were of the NONRIGID (non-structured) type commonly called "BLIMPS;" we had no other types during the subject periods.

The term "blimp" has no generic origin. There never was a type or form of airship called the "B-limp" as was once advanced. Rather, it is generally accepted that the term "blimp" dates back to World War I when a British inspecting officer snapped a finger against the taut fabric envelope of a hangared nonrigid airship. The resultant sound, he observed jokingly, was something like "blimp." That appellation stuck to "nonrigids."

Brief comment on the word "dirigible" also seems in order. That

word began life as an adjective meaning "steerable." Thus when some balloons became "steerable," they became "dirigible balloons" or "airships" whether of the nonrigid, semirigid, or rigid (structured) types. At some point the adjective "dirigible" became semantically corrupted into a noun and used to denote the "rigid" airship only. Actually, in its defiled usage as a noun, "dirigible" could apply to all airships alike, be they ^{rigids} semi-rigids, or nonrigids (blimps). Some folks even call rigids "zeppelins," whereas a "zeppelin" is a particular brand of rigid airship manufactured by the Zeppelin Company, just as the renowned "747" airplane is a "BOEING 747." So if we are talking about RIGID AIRSHIPS, let's say so clearly.

The SOURCES of information and the data used herein include the reports and histories required of each main unit of the airship organization. Also utilized to some extent is the brochure THEY WERE DEPENDABLE prepared under my supervision as a partly graphic story of our blimps in WW II.

Superimposed thereon, however, is this author's wide first-hand knowledge of what went on throughout the entire airship organization. In May 1940, the Secretary of the Navy personally ordered me from sea duty in the Pacific to duty in his Office and in the Navy Department. There, my duties in general were to act as an airship "trouble shooter" and to head up active implementation of approved policy for airship activities as far as then authorized, and place them in readiness for service under all conceivable circumstances and eventualities.

Thus I served as Senior Member of several Boards for working up our wartime airship organization, personnel and other needs; also for the selection of all our WW II airship bases in the U.S. The solitary exception was the Lakehurst (N.J.) Naval Air Station which we had already possessed and operated since mid-1921. As for Moffett Field,

our one pre-WW II airship base on the Pacific Coast. I had been a member of the Board which, in 1929, selected that site for location of an operating base for our rigid airship WACON. I had also served in the rigid airship SHENANDOAH; had commanded the rigids LOS ANGELES and AKRON, and the Lakehurst Naval Air Station, and served in "War Plans" in the Navy Department.

In 1942, I took command of the heavy cruiser MINNEAPOLIS at sea in the South Pacific. Then, in 1943, Fleet Admiral King, Commander in Chief (COMINCH) and Chief of Naval Operations (CNO) made me the Chief of Naval Airship Training and Experimentation (CNATE), and Lighter-than-Air Advisor to the Deputy Chief of Naval Operations for Air (DCCA-AIR). Admiral King's verbal instructions to me were to keep a "paternal eye" on our whole airship activity. Thus I kept well aware of all aspects of our airship activities and of all that went on in "airship circles."

The greatest part of the history recorded herein was assembled while it was distinctly fresh in my mind. There have not been included herein many of the reported but unverified airship contacts and attacks on submarines, although every one was made in all sincerity, and testifies to the continued alertness of the blimp crews.

Beside the Introduction and the Narratives found herein, I have included a number of APPENDIXES for readers who may be interested in such facets of the general subject. Though somewhat statistical in nature, each Appendix contains information believed helpful in making a fair appraisal of the WW II contributions rendered by airships.

When used herein geographically simply to signify the Pacific Fleet anchorage on the Island of Oahu, the words PEARL HARBOR appear without quotation marks. When used to mean the incident of the Japanese surprise attack on 7 December 1941, quotation marks are used.

"PEARL HARBOR" herein means the attack incident.

Some official titles are lengthy, and the first time they are used herein the officially recognized abbreviations follow, and thereafter the abbreviations are thereafter used herein. Thus, after the first use of "Commander in Chief of Naval Operations" appears, it is designated by "CNO," and thereafter some reason for spelling out the full title again.

Those who served as naval personnel during WW II were either Regulars or "USNR" Naval Reserves. But all were 100% loyal Americans who volunteered to serve their country's needs in the Navy. ^{Although} on a ship's crew, perhaps 90% ~~were~~ ^{were} Naval Reserves and 10% Regulars, ^{they} ~~but~~ all acted alike and acted alike, and no one asked anyone else if he was a Regular or USNR. Thus I have herein omitted those designations.

GOODYEAR

CAR S/N C-64 BUILT 1941

USN L-8 'GHOST SHIP'

GOODYEAR

62-20 America 1969-79

AIRSHIP CAR S/N C-64

- FIRST FLIGHT AS PART OF THE AMERICA NON AIRSHIP AT WINDFORD LAKE ON 4/25/41
- DEPARTED WINDFORD LAKE 8/25/45 FOR NEW HOME BASE AT SPRING HOLLOW, TEXAS, ARRIVED THERE 10/12/45
- WAS REMOVED FROM SERVICE (DISCOMMISSIONED) 11/6/47 AFTER
 - + FLIGHT HOURS: 18,864.3
 - + FLIGHTS: 18,242
 - + PASSENGERS CARRIED: 45,441
- NUMEROUS NIGHT SIGNS AND TELEVISION COMMERCIALS WERE CARRIED OUT COURAGE OF:
 - + HOCKEY GAMES
 - + WORLD SERIES BASEBALL GAMES
 - + AMERICAN CUP RACES
 - + OTHER TOO NUMEROUS TO MENTION
- SPECIFICS
 - + LENGTH: 227' 8" W
 - + HEIGHT: 81' 2" W
 - + WIDTH: 81' 7" W
 - + HEIGHT (STRUCTURE ONLY): 202' 18" (APPROX)
- CREW
 - + PASSENGER CARRYING FLIGHTS: ONE PILOT
 - + CROSS COUNTRY FLIGHTS: TWO PILOTS
 - + PASSENGERS FOR FLIGHT: SIX

NOTE:

CAR WAS BUILT BEFORE WWII AND USED BY U.S. NAVY FOR TRAINING "L" CLASS AIRSHIP. CAR WAS PURCHASED FROM U.S. NAVY AFTER WWII BY GOODYEAR. DISSENTMENT BY RETIREES.

RUDE AWAKENING

The sunrise period of Sunday 7 December 1941 is indelibly inscribed in the annals of history as the occasion on which a well-proportioned task force of the Imperial Japanese Navy in a well-planned, well-executed, totally-surprise attack on our Pacific Fleet lying unsuspectingly dormant within the confines of its strangely-configured Pearl Harbor base, delivered the rudest awakening to the United States in its entire existence.

The main objective of this ambitious sneak-attack had been our capital ship strength, but the assault included also nearby airfields and their aircraft.

For quite some time previous to this stunning Pearl Harbor blow, the United States had been lingering transparently and menacingly in the wings of several theaters of the raging war which began on 1 September 1939, seemingly undecided as to how, when, and where to leap into the conflict openly. Now, with one deft stroke, the Japanese had taken the initiative, and we were precipitately catapulted into immediate and irrevocable involvement in that tremendous struggle that history would record as World War II.

Not the least worrisome aspect of this "Pearl Harbor" episode was the wholly-successful traversing, in both direction, WITHOUT DETECTION, of what simply had to be thousands of miles of the broad PACIFIC OCEAN, by such an obviously significant-sized force of large surface vessels.

Now there were understandable anxiety and concern that this may have been only one sample of enemy capacity for wily imaginative planning, patient preparation, and bold execution. Now, on the heels of "Pearl Harbor," would the enemy essay to close the additional 2,000-mile gap to our mainland, and if so, how?

The answer turned out quickly to be "yes," and the instrumentality with which he proposed to try was the "I-boat," the Japanese submarine.

And so it was that only a few days before Christmas and less than two weeks after "Pearl Harbor," namely Saturday 20 December, an I-boat sank the S.S. EMIDJO off Eureka, well up the northernmost coast of California. That same day, another submarine intruder shelled and damaged the S.S. ACWORLD off Monterey Bay, well south of San Francisco. Three days later, even farther south, the tanker MONTEBELLO was torpedoed and sunk.

Now the enemy was jabbing us in our very front yard on the Pacific with a weapon for whose thrusts we should have been and now most assuredly had to be prepared to counter. How serious this underwater threat in the Pacific was to prove, we still had to find out. But at least we could not pretend surprise that submarines were being used against us, nor did we dare gamble on such blows being non-recurring or sporadic..

Back in WW I, German U-boats had caused the Allied Powers the gravest concern right up to the very end. Now again, in the conflict that erupted a quarter-century later, the once subdued but now revived German underwater craft had, well before December 1941, established that modernized submarines and their modernized operating techniques and capabilities were indisputably again a major element of military strength, and indeed a continuing scourge to their adversaries.

Furthermore, we obviously knew that Japan possessed a submarine force, albeit we may not have known how large or how efficient it actually was or might prove to be in war.

While we had been skirting the edges of belligerency in both the Atlantic and the Pacific, the sole question of our eventual open participation was simply "when." It had been clear also that once we

were an enrolled participant, we would have to expect to be slugged by underwater craft, and in short order. Our situation would then be parallel to that of our allies so succinctly expressed in an early British Admiralty paper,

"History is repeating itself and, as in 1914-1918, so in 1939-1942, although we shall not win the war by defeating the U-boats, we shall assuredly lose the war if we do not defeat them."

In that 1914-1918 "war to end wars," airships of the nonrigid or "blimp" type had proven themselves valuable members of the allied [#] ~~fleet~~ ^{fleet} antisubmarine team which eventually suppressed the U-boats. In the early WW II period before our "sideline" interest flared into actual belligerency, a number of navy men still remembered the 1914-1918 ASW campaign and felt we should be "taking out insurance" by developing an airship arm.

Prominent amongst these was Rear Admiral John W. Greenlade, Commandant of the Twelfth Naval District on the Pacific with headquarters in San Francisco. For some time, he had wanted airships assigned to his command to help build up his forces against underwater marauders who were certain to try to operate in that lucrative shipping area once it became a "war zone." Similarly Rear Admiral Frank H. Sadler, our Commandant of the Panama Canal Zone, also had asked for airships for that terrifically important shipping focus.

Although unequivocally endorsed by the Navy's General Board of highly experienced senior officers, and by the four successive Chiefs of the Bureau of Aeronautics--Rear Admirals Wm. A. Moffett, E. J. King, A. B. Cook, and J. H. Fowers--the Navy had no definite nonrigid airship ("blimp") program even on the books until Congress included in the "10,000 Plane Program" of 15 June 1940, provision for 48 nonrigid airships.

Thus "Pearl Harbor" day found us with an airship organization on paper only, with NO Fleet airship unit in service. It was obvious that airships in World War II would be confronted with a long stern chase.

EVEN MORE HUMILIATING IS THE FACT THAT AIRSHIPS WERE THUS NEGLECTED DESPITE THEIR BEING CALLED FOR IN OUR OFFICIAL WAR PLANS:

Back in Washington that dark December--and for sometime afterward--the gloom was thick enough to cut with a knife. To those of us directly concerned with airship matters, the situation was even more depressing. For, despite the accumulated log of advance evidence that we were going to need airships badly, we were now caught flat-footed and practically empty-handed in that field. Blimps couldn't be bought off the shelf, so on "Pearl Harbor" Day, as the Japanese knocked the chip off our shoulder, we found ourselves without a single naval blimp on either the Pacific Coast or in the Canal Zone. Indeed, the war was to be almost in its final stages before we got any airships at all into the vastly important Canal Zone.

On our Pacific Coast, however, we did belatedly improvise a token solution which effectively illustrates our generally hard-pressed airship situation.

In the Los Angeles area at that time, there were a few small privately-owned advertising and sightseeing blimps. As airships went, they were tiny ones--only about one-sixth the size of some of their naval kinsmen yet to come. ^{* FACTS} Their operating facilities, too, were considerably less than would be required for naval purposes. Nevertheless, they were airships, and even though they lacked the speed, endurance, and armament desired in ASW aircraft, they did possess good low-level observation and communications capabilities. Important furthermore it was that most of their pilots and engineers were officers in our Naval Reserve.

Fortunately too, at this time Commander Maurice R. Pierce, one of the Navy's airship pioneers was serving in the Inshore Patrol of the Eleventh Naval District (Southern California). Without awaiting formal negotiations, "Maury" Pierce and the owners of these blimps got together and the Navy quickly "commandeered" one of these advertising craft, the RESOLUTE, which was immediately pressed into patrol in the coastal waters off the Long Beach--San Pedro vicinity.

As a civil craft, the RESOLUTE had neither armament nor provision for its installation. However, one of the Naval Reserve pilots, Lieutenant Commander Arthur F. Sewell, was an ardent hunter with a well-stocked armory of his own. Selecting his own favorite hunting rifle, "Art" carried it aboard the RESOLUTE when it began serving the Navy still in civilian attire, and for some time that hunting rifle was the airships sole armament!

Such was the beginning of our NW II airship activity on the Pacific Coast, where enemy subs had struck first: PATROL BY ONE SMALL ADVERTISING BLIMP ARMED ONLY WITH A HUNTING RIFLE! And sadder still, even this token effort materialized only after the almost certain-to-come hostilities had actually begun and after the enemy had drawn first blood.

Our enemies well knew, and some of our responsible authorities seemed not to have realized, that instead of our being a wholly self-sufficient country, the United States depended upon voluminous overseas waterborne imports for many critical and basic materials for waging war, some of these ingredients in their entirety. Thus it was not to be long before we felt the submarine scourge in our Atlantic front yard too. Indeed, by mid-January 1942 the tide of U-boat activity had begun coursing there with real fury. Soon, sometimes within the very sight of our coastal population, the U-boat harvest of our shipping had set in with a vengeance, hideously revealed by beaches soaked with oil and

vors, and bodies of less fortunate shipmates. At great cost in lives and treasure, we were being rudely awakened to not only the vital value of our coastal shipping lanes, but also to their vastness and their patent vulnerability.

Our initial airship situation on the Atlantic seaboard while not as desperate as that on the Pacific, was nevertheless woefully weak and deficient. At "Pearl Harbor" time our total blimp inventory boasted a motley assortment of only ten craft, all attached to the Lakehurst Naval Air Station, our one and only airship operating base located just inland from the central New Jersey coast. Three of such craft were small training ships of the advertising type, one of which was already several years old. A slightly larger trainer, the C-1, was of 1920 vintage acquired by the Navy in 1935. When the U.S. Army Air Corps had been reluctantly forced to discontinue its airship activities, the Navy inherited the TC-13 and the TC-14 in 1937. They were good ships in their day but Army-configured, of course. We had also the "K-2," the prototype of the only class of naval patrol airship designed and built in the nearly quarter-century since the end of WW I. As WW II struck us, this prototype K-ship, first flown in December 1938 was still suffering from the "bugs" found in any and every aircraft of new design.

Fortunately, we had nevertheless somehow got the Navy Department to order a few more K-ships, and three had been delivered by 7 December 1941. However, they lacked any actual or even planned armament and special equipment for ASW, even of the kinds blimps had borne in WW I. The exceedingly small airship staff in the Department could recommend and urge, but decisions were made by non-airship men who had little or no interest in airships. Thus even though we carried a few blimps on the books since the end of WW I, actually IN THAT ALMOST QUARTER

NAVAL BLIMP: In fact, there were no airship guns or bombs or even their mountings.

The prototype K-2 was urgently needed for "debugging" and development into a naval craft. And the K-3, K-4, and K-5 though still far from adequately equipped, were earmarked for our first blimp squadron in the Atlantic. So there wasn't much choice when it came to sharing blimps with Admiral Greenblade on the Pacific Coast in those hectic early days, and there was no immediate prospect whatsoever for any for Admiral Sadler in the Canal Zone.

Thus it was that after the Japanese had revealed their underwater presence along our Pacific seaboard, the old Army veterans TC-13 and TC-14 were tagged to go to California. In mid-January Lakehurst crated and shipped these two craft by rail in eleven freight cars, to the Navy's former rigid airship base at Sunnyvale located near the southern end of San Francisco Bay.

But that presented still another problem. The Navy's airship representative out there, Lieutenant Commander George F. Watson, was faced not only with the technical task of unpacking and re-erecting these TC-ships at a place which had not even seen an airship of any kind for years, but also had a peculiar inter-service "political" situation on his hands. Those "political" overtones arose from a clever manipulation by the Navy in September 1935 following the loss (in 1934) of the rigid airship MACON. This airship had used the Sunnyvale base as its home port, the originally intended purpose for which the Navy had acquired the site and built the base.

But through a "deal" which now confronted Watson the Navy had cleverly "given" this Sunnyvale airship base to the surprised and non-consulted Army Air Corps in what was labeled an "interchange" for three Army airfields which the Navy's air arm had long coveted. Now we