

UNLUCKY IN JUNE: HIYŌ MEETS TRIGGER

By CAPTAIN EDWARD L. BEACH, U. S. Navy

THE roar of exploding torpedoes and the hull-crushing pounding of depth charges form the obbligato against which the following narrative is laid. The year was 1943, the day June 10th; the place Tokyo Bay; the antagonists a Japanese Carrier Task Force and a U. S. submarine. To both Japanese and Americans the battle came suddenly, without warning, and to both it brought near disaster.

In war, as in argument, there is your point of view—and the other fellow's. During the heat and tension of conflict the other side of the story is remotely appreciated, if at all; but afterward, upon infrequent occasion, the participants may have the good fortune to exchange views. And rare, in such a case, is the individual who finds it unnecessary to change at least some of his ideas.

Three years ago I received a letter from a Japanese gentleman, employed at the time as a civilian in a U. S. occupation base in Japan, who styled himself "Ex-Captain, Imperial Japanese Navy." Fourteen years ago he and I were pitted intimately against each other in battle; he as Chief of Staff to the Admiral commanding a carrier division; I as engineer officer of the submarine which attacked the division flagship. The outcome was a victory for the submarine—we heard four torpedoes explode into the carrier; but it was not a conclusive outcome, for she was salvaged. Nor was it an easy one.

The following combined narration is the joint product of Captain Takeo Yasunobu, Imperial Japanese Navy, for his original and subsequent letters; Mr. Roger Pineau, historian and Japanese scholar who researched the official records of both navies for additional data; and the official war patrol report of the USS *Trigger*. Our skipper at the time, as of this writing about ready to put on the uniform of a Rear Admiral, USN, has also kindly checked the facts as given herein against his own recollections. We believe this is the story of what actually happened:

On the last day of April, 1943, USS *Trigger* (SS-237), Lieutenant Commander R. S.

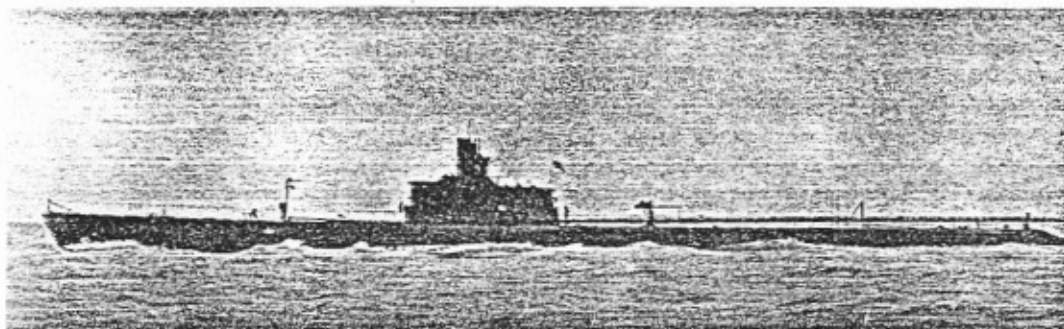
Benson, departed Pearl Harbor bound for Tokyo Bay on her fifth war patrol. The voyage was uneventful except that en route we suffered a severe engine casualty which damaged the crankshaft of one of our four main engines. Though we put the engine back together for emergency use, we knew it would not last long if called upon. Its loss reduced our surface speed and our battery-recharging capacity, and as our last day on station came around our score for 29 days off the enemy capital was only one ship sunk and two more damaged. In addition, we had withstood a most professional depth-charging by a freighter which must have had a crew of anti-submarine experts.

It was this 30th day which became the red-letter day of the patrol. The events which led up to it, we now know, had begun nearly three weeks earlier, eleven days after we entered our assigned area.

At 1005, on the morning of the 21st of May, we sighted two modern destroyers, some small planes, and what looked like the upper works of a large ship far over the horizon headed for Tokyo. According to our patrol report, Benson was sure in his own mind that the big ship could be nothing less than a first-line aircraft carrier. We watched closely for indication of a change of course which might bring us an opportunity to

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He is the author of two books, *Submarine*, and *Run Silent, Run Deep*, as well as of various articles and short stories.



Official U. S. Navy Photograph

HER TORPEDOES CRIPPLED, BUT DID NOT SINK, THE JAPANESE CARRIER HIYŌ

In June, 1944, the USS *Trigger* (SS 237) sent four torpedoes into the Japanese carrier *Hiyō* in Tokyo Bay. *Trigger's* crew believed they had sunk her, but years later, Captain Yasunobu who had been aboard at the time, wrote that the carrier had limped back to Yokosuka under her own power. She was repaired and went to sea again. Later in the same month she took part in the Battle of the Philippine Sea and was finally sunk by torpedoes from a submarine and torpedo planes.

attack, but none was forthcoming. In disappointment we saw the enemy warships go out of sight.

On the next day, the 22nd, an appreciable segment of the main Japanese battle fleet zigzagged before our periscope into Tokyo Bay. Numerous planes criss-crossed the sky and destroyers patrolled the flanks and van. But this time we were successful in reaching an attack position—and feeling horribly alone, dreading that our black underwater shape might be spotted by one of the anti-sub planes overhead, we slipped under the milling escort vessels. From my station at the diving panel, directly beneath the hatch leading from control room to conning tower, I could see the Captain's feet and by remote awareness remain in touch with the situation topside. They were so many, we so few; my belly was a tense knot of readiness as we penetrated the screen.

A heavy cruiser crossed our bow at moderate range—a fair shot. We made ready the bow tubes, and I prepared to fight for depth control as we fired. But coming up astern of her were three battleships in column with an aircraft carrier. If they zigged right, or not at all, or moderately to the left, we would have something really big to shoot at. We played for the big stakes.

The cruiser passed unaware. The big ships were coming up—and then came the zig: hard left. Our skipper watched helplessly as the battleships and the carrier counter-marched away from us, leaving only an empty ocean

and a light, receding haze on the horizon.

That night we burned up the airwaves with an operational priority message for ComSubPac. No doubt he and Admiral Nimitz would be interested in the concentration of fleet units in Tokyo.

Two and a half weeks passed, and the time was forty minutes after midnight on the morning of the 9th of June. We were rolling rather heavily in a choppy sea off the harbor, recharging our batteries, when our radar showed a contact. We stopped the battery charge—this might be regretted if the ensuing action wound up in a long submerged evasion—put our three good engines on propulsion and took off to develop the contact. In the dusky moonlight we could not quite make out the enemy, but it was soon evident that there was at least one large ship, maybe two. There were also several small ones, and our plot soon informed us that they were making high speed. Careful scrutiny of the distant silhouettes as they came closer disclosed the flat, horizontal outlines of two aircraft carriers.

Admittedly this was not the kind of emergency we had anticipated; our bad engine vibrated and knocked with violent abandon, but we ran the throttle up to the full power setting and avoided dwelling upon what might happen if the unbalanced stresses snapped the crankshaft. The enemy ships were zigzagging, their speed plotted at twenty-three knots. We were well to the southeast of the enemy track, but they were

running east, and despite our lower speed, we slowly gained in bearing. If the bad engine would only hold out—it held. With all engines wide open, salt spray whipping our bridge and exposed faces, we edged into position, sharp on the bow of the task force. Benson steadied for a final radar range and bearing. There would be but a single chance to attack, and it had to be good, for we would never be able to overtake the task force in a stern chase. Besides, the destroyers would be having their turn, and we would most likely be in no condition to pursue.

But again we were to fail our objective. We had started to turn to the attack course when plot informed Captain Benson that the targets had made a radical course change to the south. Instead of nearly in front, we were suddenly well abaft their beam. Had we made no effort at all to close the track, the task force on the new course would have come right by us.

For an hour we pounded along, far out on the beam of the enemy and losing ground every minute, hoping that chance would send them back toward us. But the carriers' speed advantage left us rapidly astern, and when they finally turned back to the north we had fallen too far behind.

In addition to the engine, we had been having more troubles as the patrol drew to a close. Our main storage battery, the ship's only source of power while submerged, had been in continual combat service during the sixteen months since our ship had been commissioned; though its peacetime life should have been well over two years, it had already begun to show a loss in vital capacity. This meant that our submerged endurance was lowered and our charging time increased.

Of even greater immediate importance, our air compressors had developed a tendency to break down during this patrol. Many times we had been forced to dive in the morning without a full charge of compressed air. Soon, we knew, the compressors might cease to function at all, and without compressed air a submarine cannot surface, cannot shoot torpedoes, cannot start its diesel engines, and, by extension, cannot dive. The thought was not a happy one.

We were due to leave Tokyo at sunset on

the 10th of June after thirty days on station. *Trigger* badly needed overhaul, and we were ready to go.

Sunset on the 10th would have been approximately eight o'clock in the evening. We might have selected a spot in our area along our homeward-bound route to patrol on this last day, inasmuch as upon surfacing we were to set course for Pearl Harbor. Our area had, however, only one focal point for enemy traffic: Tokyo itself, and we had hoped to do a little better on this patrol. Despite our mechanical difficulties Benson therefore resolved to play his string to the limit, and we spent our 30th day submerged on the main ship route close to the harbor entrance. When darkness fell, about 2100, we were to surface and take the great-circle course for Pearl.

All day long we saw nothing, until twenty-four minutes past seven when everything changed at once. Lieutenant (jg) Willard Long, who had the periscope watch, sighted smoke on the horizon in the direction of Tokyo. Willy sounded the general alarm, and the next look showed Steve Mann, our Exec, the superstructure of an aircraft carrier, bows on. Succeeding observations established the fact that there was but a single carrier, and that it was approaching at an estimated twenty-one knots. A lean and deadly destroyer patrolled either bow. Benson snapped quick looks at them between observations of the target, for they represented our greatest danger. The carrier showed us starboard and port bows alternately. He was zigzagging with wide sweeps, but we were, by chance, exactly athwart his base course.

And from Yasunobu:

"31 December 1953
Tokyo, Japan

"Dear Commander E. L. Beach:

"I am Mr. Takeo Yasunobu about whom Commander R. H. Konig and Lieutenant Commander L. D. Herman informed you. I am an ex-Japanese Navy Captain, and now work at NAF Oppama, Japan, as an employee. I have read SUBMARINE! which you have written, and I found your submarine *Trigger* had attacked our carrier *Hiyo*—it is not *Hitaka*—.

"I think life is a mystery, because, by chance, I write as a friend to you whom once I met in

combat ten years ago. At that time we were not looking at each other. We were confused with heavy damage on the surface of the sea while you were going through difficulties because of our depth charge attack hundreds of feet under the waves.

"I want to write you about the battle. I expect you will be glad to hear about it. It is more than ten years since that day, so my memory has faded and, besides, all my notes and official records were burned. But I believe the main point of the story will remain.

"At that time I was Commander and the senior staff of the Second Carrier Division which consisted of two carriers (*Hiyō*, *Junyō*) and four new-type destroyers. The Commanding Officer of the Division was Rear Admiral M. Sakamaki (later Vice Admiral) and the skipper of *Hiyō* was Captain M. Sumikawa (later Rear Admiral). These two officers are still alive.

"The essential particulars of Carrier *Hiyō* were as follows:

"Displacement	27,500 tons
"Length	706.2 feet
"Breadth	87.6 feet
"Depth	26.5 feet
"Flying deck	689.8 feet × 89.5 feet
"Max. speed	25 knots
"Laid down November 20, 1939, at Kobe Kawasaki Dock Yard.	
"Launched June 24, 1941	
"Completed July 31, 1942	

"This carrier was converted from a Merchant ship *Izumo-Maru*. Her sistership *Junyō* had the same essential particulars and was converted from *Kashiwabara-Maru*.

"I was appointed chief of staff in the middle of April 1943. I went to Truk Island to the *Hiyō* which was the flag-ship. We came back to Yokosuka on board *Hiyō* accompanied by two destroyers at the end of May with some tactical duty. On this trip, we left most of the planes at Truk Aerodrome for tactical purposes and we kept a few planes on the ship for patrol. . . ."

Japanese naval records brought to the United States after the war reveal that *Hiyō* had been at Truk since March 27, 1943, and departed for Yokosuka on May 17, arriving there on the 22nd. Her accompanying destroyers on this passage were fast ships of the modern *Fubuki* class. Good reliable escorts for a valuable carrier traveling in "home" waters—and a good estimate by Benson, from a few fleeting periscope observations at long range.

Yasunobu continues:

"Before we left Yokosuka, I asked the Yokosuka Naval Air Base to patrol for submarines on the first day, and got the agreement. But they did not fly at all, for the day was very foggy. From the mouth of Tokyo Bay we made a screen of destroyers, and planned to sail down along the west side of South Island.

"But the west side was too foggy, therefore we changed our course to the east side of the islands. We were proceeding South at 18 knots and zigzagged radically. Near sunset, the fog became clear, therefore we wanted to pass between Miyake-Jima and Mikura-Jima islands, and to the west side according to our initial plan, and we changed the course.

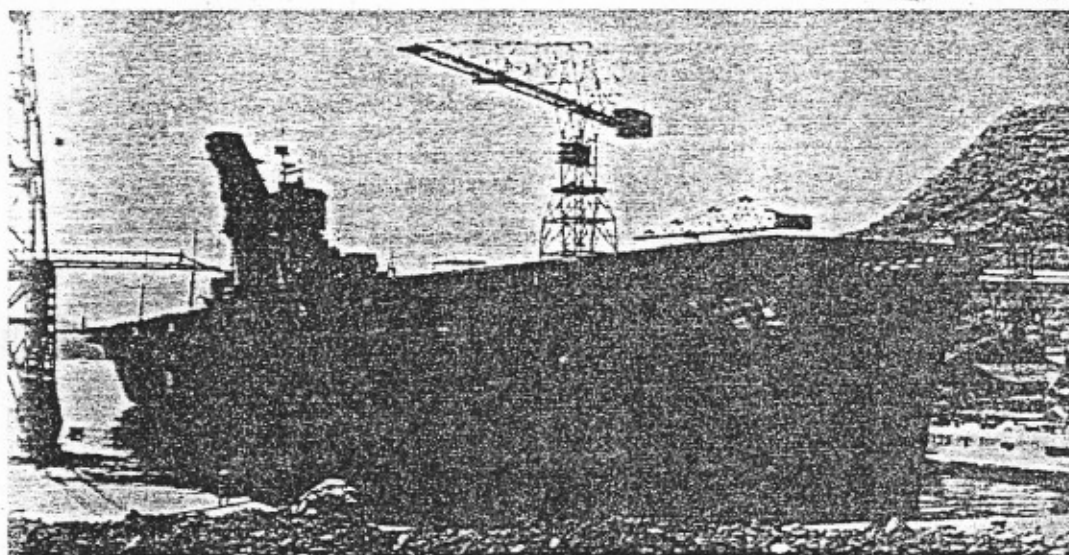
We could not then, of course, know or care that this was the same task force we had sighted on the 21st on its way from Truk. Nor was there any way of realizing by what a slim chance fate had thrown this ship our way a second time, or, more to the immediate point, that as *Hiyō* reached us her helm had been put over for a major course change. Had this happened a few minutes earlier the maneuver would have taken her neatly out of danger.

As the enemy approached we prepared for a rough time. Through our sound gear—and in the later stages of the approach through *Trigger's* hull itself—we could hear the on-rushing high speed propeller beats of the destroyers and the deeper toned rhythm of the carrier as they raced in formation toward us.

"Down" 'scope! Watch your depth! Destroyer passing overhead!"

Propeller beats coming nearer, drumming through the thick steel of our hull, invading the very air we breath, the foul sticky air of diesel fumes and battery odor and human sweat.

The chopping, roaring, drumming beat rises louder, freezes us in hypnotic rhythm. The destroyer is close now, only a few feet away—in fact, it is right overhead. Louder, shriller, the cacophonous rhythm echoes through the metal of the ship. Are we deep enough for him to pass clear? Are we sure of his draft? Or will he strike us, careen us over, open our hull with his slashing bronze propeller blades? Your gut jumps and your muscles tighten. You feel the innate frenzy, the heart-stopping terror, lying just under the surface of your self-possession.



Courtesy of H. Fukaya

JUNYŌ—SISTER SHIP OF THE CARRIER HIYŌ

The two Japanese carriers of this class were converted from liners. Like the *Hiyō*, the *Junyō* was damaged by an American submarine. This photograph was taken after the war at Sasebo shortly before the *Junyō* was scrapped.

And then the drop in pitch; he's going away now. He's past, unaware. Or maybe not unaware. Not at all unaware. At least he will have to turn around to come back. Time to get the torpedoes in the water. After that—

"Up periscope!"

"There's the target! Bearing, mark!"

"Down 'scope!"

Trigger has steeled herself for his moment. The tension, and the perspiration, are at their maximum. Our torpedoes arrow-straight on the target—we the taut bowstring—

"Stand by forward!—Up 'scope!—Mark!
—Down 'scope!"

"Fire!"

The bowstring is released. Six torpedoes arrow into the frothy, grey ocean, broadside onto the carrier. He is only two-thirds of a mile away, his starboard beam vulnerable before the periscope. . . .

"At that time, just two minutes before sunset, the duty officer on the bridge saw the big white bubbles of torpedoes in the middle of the calm cobaltic seas, and on the right at about 4500 feet from the ship. He cried 'Torpedoes! This direction.' We looked at it, six white tracers were coming at us. The Commanding Officer ordered to destroyers by the flag signal, 'Attack

the enemy submarine.' The Captain ordered 'Port side helm. Full rudder.' These events occurred instantaneously.

Torpedoes are ejected by compressed air, but to avoid making a huge firing bubble the torpedo tube has a "poppet valve" which opens at precisely the proper moment to swallow the air before it escapes from the muzzle of the tube. From Yasunobu's description it would appear that our poppet valves had failed to operate properly. It made no difference so far as the attack was concerned, for we were too close for avoidance, but six great white bubbles gave the two destroyers a perfect aiming point for their depth charges.

"Captain, give me speed!" I shout up the hatch at Benson's feet.

Our torpedoes, with warhead, are each three hundred pounds heavier than the water they displace. Water takes the place of each, of course, but we have lost weight in the bows of our ship equal to three hundred pounds times six.

Eighteen hundred pounds light forward—without speed for better control the submarine might broach surface. We should have taken in water when our poppet valves swallowed the firing impulse bubbles, more

than enough to equalize the weight loss, but no telling how much, if any. As diving officer my duty is to control depth. Bow planes on full dive; main vents already open, in case any torpedo impulse air has become trapped in our ballast tanks.

No word from the Captain. Our speed is so low that if the ship is out of trim we may not be able to control depth. Anxiously watching the depth gauges. I detect the quiver of the needle in the upward direction, instantly order more water flooded into the forward trimming tanks.

Forward trim is open to the sea. Air whistles out of the vent pipe. No time to try to figure out what went wrong forward . . . again I shout: "Captain, I need speed!"

Clink of the annunciators. The arrows flip from "one third" to "two thirds." The captain calls from the conning tower. "That's all you can have, Ned! The destroyers are coming! Take her down!"

Savagely, I fought my private fight, flooded tanks as rapidly as the wide open valves could take the water. We dared not broach. It would have been fatal—but up we came; 62 feet; 60 feet; 59 feet—58—57 . . . 56—our depth gauges stood at 56 feet for agonized seconds, then we started back into the welcome shelter of the sea.

"Take her deep. Three hundred feet! Rig for depth charge! Run silent!"

I could see Captain Benson's feet going around the periscope in the conning tower above my head. A last quick look. Our torpedoes have not yet arrived; soon we shall have our moment of triumph, and soon we shall pay for it. The skipper is looking at the target when a loud, rather high-pitched, tinny explosion shakes the ship. A hit! cheers—we raise clenched fists in defiant yells of victory. Seconds later, another explosion. More cheers. Benson lowers the 'scope. He cannot wait longer; *Trigger* is on the way down, and her hull resounds with the beat of the destroyer propellers speeding towards us. Two more hits are heard before the periscope bottoms.

"By ex-Japanese naval way of avoiding torpedoes, the skipper should have ordered 'starboard helm' in this case. But I did not suggest it because it would add to the confusion. The third fish exploded itself after running about 1000 feet

and a big water column arose. The right side destroyer turned to the site of the bubbles and began a depth charge attack. Our ship turned to the left to avoid your torpedoes. But I thought it would be in vain; some of them would surely hit, for you had a very favourable position to fire and the skipper failed to turn in the right direction.

"The first and second torpedoes passed before the bow. The fourth hit under the right hawse hole and splashed water higher than the bridge. The ship trembled terribly. The fifth one hit at the middle part between the bow and the bridge, but when it hit the torpedo's head dropped from the body and it flew along the side. If it had exploded, the ship's condition would have been much worse than it was. The last one hit just under the bridge, and a big fire column covered the bridge for an instant. It burned many charts which were pinned inside of the bridge, and also the Captain's hair. All of the crew on the bridge were staggered by the shock.

"The first hit did not do much damage; it only broke the chain locker. But the last hit damaged us vitally. It broke the first boiler room and the bulkhead of the second boiler room, and killed all of the crew of the first room and half of the second. These rooms all took in water at once. The third boiler room leaked by and by. All fire was put out and all steam went out and the ship stopped."

Trigger counted four explosions, and we jubilantly credited ourselves with a sure sinking. Now, thirteen years later, we are unable to account for the discrepancy between our version and Yasunobu's. Benson saw the first two explosions and they looked like hits in the forward part of the target to him. One of the two explosions we did not see was no doubt the hit under the bridge. Yasunobu records an additional dud hit, but this caused no explosion, and we therefore conclude that either Yasunobu or Benson is in error. Yasunobu was certainly in the better position to observe, but Benson's report has the advantage of much greater propinquity, time-wise. If there was another explosion, it must have been a second "pre-mature."

"She was down by the head and taking water badly forward. One of the oil tanks might have been on fire. The big funnel was puffing out black smoke and the decks near the funnel became hot by and by. The smoke did not take a serious turn. And lucky for us, the gasoline did not catch fire

and there was no leaking from the gasoline tanks.

"The watchmen who were silent before the torpedoes hit, began to report 'Torpedo's trace on the starboard,' 'Periscope on the port side,' many times. But these reports were almost all false reports. The skipper ordered fire against the submarine. All machine guns fired in every direction, aimlessly. I suggested to the Commanding Officer to cease the fire, for the firing was useless and besides it was in danger of shooting our own destroyers. But it was very difficult work and took a long time, because all electric power had gone out, and there was no way to signal to the batteries, except to pass the order by the messenger. As another reason, it seemed to dull one's fears to operate weapons at the desperate period, even though it may not be effective against the enemy. Many men worked hard to water down with hand pumps, for there was no power in the ship. I thought it was about one hour after the hit that all the men became panicky. You expressed this condition 'little men dressed in white run madly about his decks. His gun shoots wildly in all directions.' Her bow sunk by and by, and the sinking stopped when the hawse hole touched the water."

As *Trigger* plunged recklessly with the forward part of the ship now heavy from the extra water I had been forced to take in, our sonar man could hear two sets of propellers rapidly coming closer.

And then came the depth charges, in a concentrated, crushing, pounding barrage which threatened our eardrums and our sanity, as well as the watertight structure of our ship. *Trigger's* deck leaped under our feet. The men on the diving controls fought to retain their footing, to maintain some semblance of control over the violent movements of the ship. Instructing them was impossible under the shattering noise, but they needed none. In the infrequent intervals between depth charges, once the slow-fading reverberations had died, there was deathly silence. Someone was drumming with fingernails on a hard polished surface. My temper boiled up and over. Throwing a glance of fury behind me, I called out:

"Stop that drumming!" . . . followed by a few choice expressions suitable only for special occasions.

The fingernails stopped, their embarrassed owner shamefaced.

Another line of depth charges. All together—no space between—all dropped at once.

Trigger's steel frame again came alive with tingling, electric-like vibration. We were by this time below our maximum allowed depth, forced there by the explosion of the depth charges, and the ship was heavy, partly because of water taken in to stop her initial rise, and partly because the compression of the hull reduced the water displaced and thus reduced buoyancy.

We had made, however, four solid hits in a huge first-line carrier! That was something! No submarine in our navy had yet even damaged a prize of this magnitude. With four hits, spaced evenly along her length, the ship must surely sink. Our spirits soared excitedly in spite of the desperate condition in which we at that moment found ourselves.

We could not pump the excess water out of our bilges or from our tanks, for our pump was old and noisy; and we dared not blow with compressed air, for this is even noisier. We had to run at creeping speed, consequently with minimum hydroplane life, and—somehow—carry the excess weight. But it was too much, and slowly, as inevitably as fate, our depth gauges crept around. Between explosions I instructed the men at the planes to give the ship a large up-angle. This slowed our rate of descent. It was all we could do. Every man aboard appreciated, wordlessly, the significance of the unusual climbing attitude of the ship, glanced at depth gauges or sea-pressure gauges, silently went his way. The bow and stern planes were, of course, in "hand" power instead of hydraulic, and silently, relieving each other by turns, the sweating planesmen struggled for control. The destroyers were listening for us, alternately dropping depth charges and listening. We could practically hear them listening.

The intervals between depth charges grew perceptibly longer, until finally it appeared that perhaps the last charge might have been dropped. We could hear the propellers of two destroyers milling about topside and in the distance the creaking and groaning of a large ship rolling helplessly in a seaway. Perhaps our target had not sunk. Could we come back and re-attack? Perhaps, if we were able to shake them. But we still dared neither pump nor speed up. Now, if ever,

the destroyers were listening for us. No hope whatever of regaining periscope depth—of seeing, even if the darkness would permit.

Dogged by two destroyers, we crept away toward the northwest. We had been submerged for sixteen hours. We needed badly to come to the surface before daybreak; needed the opportunity to reload torpedoes, pump water, and increase speed, all of which involved the making of noise.

"The Commanding Officer, skipper, and I stayed in the bridge throughout the night. I feared and prepared against your second attack.

"For the big immobile carrier might be a very fine target for you and there was some visibility on the sea by the moonlight. Besides, we had no reports from destroyers that they did have an effective attack against the submarine. We were drifting helplessly and we hoped the moon would hide and it would become completely dark."

According to our log the last depth charge was recorded at 2109, and our situation was now desperate. *Trigger's* decks and bulkheads bulged with the compression of the outer hull; water seeped in through overburdened sea fittings. The temperature had reached 125° with a moist, enervating humidity which sapped our strength. To save noise we had long ago put the bow and stern planes in hand power and secured the hydraulic plant which normally operates them. In the close, fetid atmosphere, men ran perspiration as they cranked violently on the huge wheels, and we had gone through half the crew for reliefs. Our exertions, and the tension, had literally catapulted moisture into the air, and with the high humidity it had condensed rapidly on the cold metal. Our waxed linoleum decks, lately fresh and clean, were now a slimy, slushy ooze, composed of wax, dirt, and sweat.

We panted for oxygen in the starved air. Our Pharmacist's Mate showed me the indication of over 3% which he had registered in his carbon dioxide testing apparatus. I quietly ordered him to valve oxygen and breach the tins of CO₂ absorbent, spreading the lithium hydroxide in any handy place, preferably on some out-of-the-way bunk. As he turned away he offered me a salt tablet, which I gratefully swallowed, my suddenly dry throat choking as I gulped and jammed it down.

The ship had for some time been at the maximum up-angle we felt it practicable to assume, around 15°. But slowly she sank, nevertheless, for we could neither speed up nor pump. Slowly the accumulation of water in the bilges and the compression of the hull under the fantastic squeeze of the sea water at this depth was making us heavier. Foot by contested foot, we sank into the abyss of the sea.

Approximately half an hour after the last depth charge, the sound of enemy propellers having droned farther away, the skipper authorized me to try pumping a little. But hardly had the pump started than another charge rocked us. It was a little more distant, but it served warning that we were not yet rid of the hunters.

We speeded up slightly, however, thus giving us sufficient lift on our control surfaces to maintain depth; and soon I had the ship on an even keel. Just after midnight we again started the pump, and shortly afterward brought the tip of *Trigger's* periscope above the surface of the sea.

There was nothing in sight, but it was so dark that very little could have been seen through the periscope in any event. We were not there long before the sonar man reported high speed screws approaching. Down we went again, under better control this time.

But no attack developed. The enemy destroyer was not aware that his swing through the area had come near us, and he kept right on going. At a few minutes before three *Trigger* finally rose to the surface and started her three good engines, luckily none the worse for wear after the pounding they had received. We were not able fully to recharge our battery, for we had only cranked a few of the life-giving ampere-hours back into it when approaching dawn forced us to dive once more. We had, however, cleaned out the ship, dumped the accumulation of garbage and other trash, and reloaded our torpedoes. But an inventory of the ship's condition was not pleasing.

Both air compressors were out of commission, one knocked entirely off its foundations. Our steering had developed an unusual thump, though it worked well enough, and inspection disclosed nothing to explain the noise. Our main hydraulic plant could

no longer hold pressure of either air or water. Both sides leaked, and it was noticeable that all our hydraulic equipment functioned more slowly than before.

A thorough check failed to reveal any misalignment of propeller shafts or engines, for which we counted ourselves fortunate in view of the shaking they had lately received; and *Trigger's* stout hull, subjected to its most severe ordeal, had come through valiantly. We and our ship were safe, though battered, and we were homeward bound.

"Her chief engineer was a very brave and active officer. He kept the third boiler room and spurred his men on and fixed it under the worst and most critical conditions. He restored the steam next morning and we could use twin screws from eight o'clock. Before this, the light cruiser *Isuzu*—5500 tons—came on the scene of the disaster to help us in the early morning. She tried to tow our ship, but it was in vain, for the carrier became too heavy and in too badly a trim.

"The damaged *Hiyō* started to Yokosuka on her helm. She moved very slowly (her speed was only six knots) but it was very pleasant when she moved and took a course North after a long day of hard work.

"*Hiyō* anchored at Tateyama at midnight and returned to Yokosuka safely next morning, the 12th of June. She was repaired at the Yokosuka Naval Dock Yard, and went to sea again. She took part in the battle near Saipan Island in June, 1944, and she received two torpedoes from submarine and torpedo planes and took fire. At last she sank under the sea near Guam Island.

"She launched in June, but June was a very unlucky month for her.

"Yours truly,
Takeo Yasunobu"

As aftermath of the battle, when *Trigger* arrived at Pearl Harbor inspection of her condition by the Materiel Officer resulted in the decision to put her in immediately for a Navy Yard overhaul, where she spent the next month and a half. We there received a new battery and new air compressors, and our engine and hydraulic plant were repaired. Our adversary, we heard, had not sunk at sea, but had been intentionally beached at Yokohama Harbor. We consoled ourselves that she was at least "sunk" to the same degree as *West Virginia* and *California* on December 7, 1941.

And *Trigger's* fight with *Hiyō* had an-

other far-reaching effect. When we arrived back in Pearl Harbor Captain Benson was asked by Admiral Lockwood, our ComSubPac, once again to go through everything he could recall relating to the action with the Japanese carrier.

The information in ComSubPac's hands was to the effect that our target had been hit by only two torpedoes. This, measured against our positive evidence of four torpedo explosions, confirmed Admiral Lockwood and his staff in a belief which had long been growing. Our torpedoes were equipped with an "influence" exploder similar to that of the German magnetic mine, designed to detonate the warhead when it got within the strong electro-magnetic field existing beneath a ship. But our exploder was complicated and too sensitive. The magnetic field of a ship is not confined to the area beneath it, and our torpedoes had a tendency to detonate before coming close enough to their target to inflict damage.

Survival of our carrier was the last straw to Admiral Lockwood and his staff. On his own authority he directed all his submarines henceforth to deactivate the magnetic features of their torpedo exploding mechanisms.

This was not the end of our torpedo troubles, for we then discovered that the contact exploder was also faulty, and finally that the torpedoes did not run at their correct depths. But the heartening thing was that at last the Submarine Force, Pacific Fleet, had taken the torpedo problem into its own hands.

Within a year the all-out research to which *Trigger's* experience contributed cured the trouble. In effect, it was *Hiyō* among others who gave us the sure-fire torpedo which was certain to explode upon striking a target. It took us only an additional year to sweep the Japanese Merchant Marine from the high seas.

Some months later a story came to our attention to the effect that one of our submarines had lain on the bottom of Tokyo Bay for a month, watching the enemy construct an aircraft carrier. On the very last day of her patrol, when due to start back to Pearl Harbor, the sub had sent six torpedoes crashing into the hull of the newly-built ship

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as she went down the ways, neatly sinking
her in the harbor.

We hardly recognized ourselves as the
originals of this fanciful tale. Our carrier
looked new, true; because of the lack of
planes on deck we thought her probably on
trial. And she had been damaged virtually
in her own home port, and had lain half sunk
there for days, in plain view. But that was
all. Nevertheless, the embroidered yarn
made us regret more than ever that we had
been unable to go back and finish her off.

On the other hand, as I wrote to Captain
Yasunobu, since the outcome of the war
was not thereby affected I am now less dis-
appointed that we did not completely sink

his ship, for had we done so I might never
have received his valuable and illuminating
correspondence which is quoted herein.

As Yasunobu says, *Hiyō* was launched in
June, torpedoed in June, and finally sunk in
June. She was not lucky in June, nor, evi-
dently, very much so at any time. Her total
evaluated contribution to the Japanese war
effort, considering the morale effect of her
ignominious return to port, and her influence
on our torpedo development, may even be
counted as a net gain to the Allies.

Lucky or not, *Hiyō* was a brave sight as
she came thundering down the line toward
our periscope—and I, who never saw her,
will always remember her thus.



ALL SHOT

Contributed by J. H. MAKINEN

During the early part of World War II, while serving aboard the USS *PC-616*, a constant drive was conducted to maintain all equipment such as guns, mousetraps (anti-submarine weapon), depth charges, and depth charge throwers in tip-top condition.

One young seaman, who reported aboard after all training was completed, was duly impressed by this doctrine and how the failure of any such equipment might cause the loss of an anti-submarine engagement.

As chance had it, the seaman's first firing of any type gun was when an actual sound contact was made and mousetrap and depth charge runs begun. Stationed forward, the sailor did his duty well in loading and firing the mousetrap charges. When a standard depth charge pattern was decided upon, he, along with the rest of the fo'c'sle gang, anxiously watched aft as it began.

"Drop one!" "Fire two!" were the commands. The ship vibrated, shuddered, and the black powder smoke of the "K" guns swirled about obscuring the fantail. The depth charges flew high in the air out on the beams, their attached arbors separated in mid-air and fell with a splash into the sea.

At this moment, with a look of stark tragedy on his face, the young seaman turned to me and said, "Dammit, Mac, I knew they wouldn't work when we wanted them to. There goes the gun and everything!"

PUBLIC INFORMATION

Contributed by LIEUTENANT COMMANDER P. H. KLEPAK, U. S. Navy

In September, 1956, during our DE open-house visit to the rarely visited port of Fort Pierce, Florida, we were deluged with people of all ages. Everyone was interested in our guided tour and they all asked questions.

Most of the officers doubled as guides when the volume of visitors threatened the lifelines. The gunnery officer, however, was hard pressed with one rural guest. She was an elderly lady and on approaching each piece of ordnance equipment, her rapid identification flabbergasted him. He was dumfounded when she looked at the hedgehogs and calmly observed, "Hedgehogs—Mark 11, I think?"

But when she drawled, "Why don't you have 'WEAPON ABLE?'" he was completely nonplussed. "I never miss 'Navy Log' on TV," she explained.

(The PROCEEDINGS will pay \$5.00 for each anecdote submitted to, and printed in, the PROCEEDINGS.)