

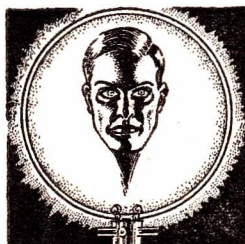
STARTLING STORIES

Vol. 15, No. 3

A THRILLING PUBLICATION

July, 1947

An Amazing Complete Novel



The Kingdom of the Blind

By **GEORGE O. SMITH**

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Cover Painting by Earle Bergey—Illustrating "The Kingdom of the Blind"

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OPERATION ASDEVLANT

By **LT. COMDR. WARREN GUTHRIE, USNR**

In a future war, the greatest menace we may have to combat is likely to be the highly scientific undersea raiders of the foe!

EDITOR'S NOTE: Lieutenant Commander Guthrie is one man who knows whereof he speaks—both in the matter of submarines and aerial missiles. Born in Syracuse, Nebraska, in 1911, he took an A.B. at Nebraska Wesleyan, an M.A. at the University of Michigan and won his Ph.D. at Northwestern. Since 1934 he has been a member of the faculty of Western Reserve.

During the war, Commander Guthrie attended the Air Combat Intelligence School, studied anti-submarine technique aboard the U.S.S. Santee, served as assistant to the Tactical Officer, Anti-Submarine Development Detachment, Atlantic Fleet and was Air Combat Intelligence Officer aboard the big carrier, U.S.S. Bonhomme Richard.

So when Commander Guthrie paints us a picture of the turns a third world war could well take, he is not talking wildly. We believe that this quiet and scholarly discussion of possible future warfare has a real place in a magazine dedicated to science fiction.

IT'S a moonless night along the coast of industrial New England. Giant radar stations sweep the sky. An attack by enemy buzz bombs packed with atomic catastrophe is expected. It's known that country X is about to move and America wants no second Pearl Harbor in World War III.

Far north, across the wastes of the Arctic, fly our defensive patrols, set to intercept possible long range missiles. But, even as the whole defensive system swings into protective action; the dark water breaks smoothly over radar-camouflaged domes of enemy submarines coming up for a final survey before the attack.

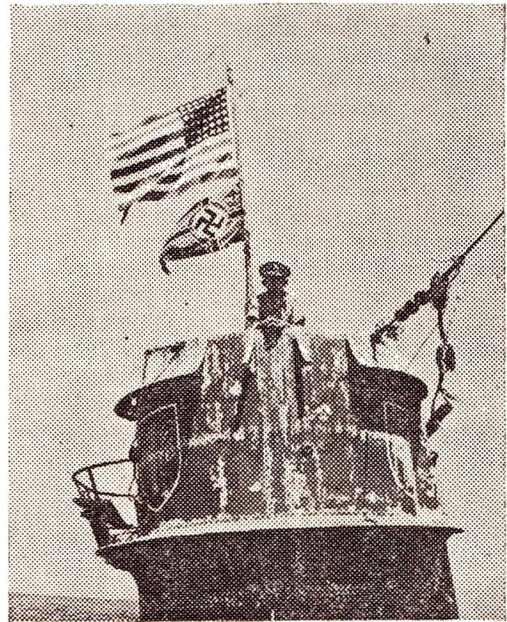
At H-hour minus 5 minutes, the sleek, black hulls break water off New York, off Boston, Block Island, Cape May, Norfolk and Charleston.

Allowances are made for wind and air density, launching rails are adjusted and the enemy bombs are underway on their short range, low-level flight to the industrial and population heart of America. With all forces alerted to air attack, the telling blow that

might win the war for the enemy has come, as in World Wars I and II, from under the sea.

Fantastic? No. Listen to the testimony of Admiral Jonas Ingram, Commander in Chief, Atlantic Fleet:

"It is definitely possible for New York to be attacked by enemy buzz bombs launched



Official U. S. Navy Photos

The Stars and Stripes fly above the Swastika on the first submarine captured intact by the U. S. Navy

from submarines. Near the end of the European War we were forced to alert New York against such an attack."

And, remember, Admiral Ingram was talking about yesterday's submarine—for even a beaten and battered Germany was ready with a new and vastly improved U-boat

The Story of Anti-Submarine Warfare!

when the Army finally ended the long battle of the Atlantic and the victorious Allies marched into Berlin.

Listen to Captain A. B. Vosseller, Commander of the Anti-submarine Development Detachment of the Atlantic Fleet during the grim days of the Battle of the Atlantic:

"The most dangerous offensive weapon of the next war may well be a bomb launching submarine."

Civilians Warn Us, Too

Want civilian confirmation? Here is the word of Dr. Charles Squires, long time member of the Navy's famed Anti-submarine Warfare Operational Research Group. "German buzz-bomb attacks on New York were planned for 1945," he says. "In the next war, if it comes, such attacks appear inevitable."

There, then, is the sober judgment of men who know the facts about submarine warfare. In planning our defense against possible aggression in the future, let's not sell anti-submarine forces short.

How can we lick the submarine in tomorrow's war? The Navy believes it has found the answer—and that answer is continued experiment and research on counter-weapons and tactics. For the submarine, in two wars, has driven us to the ragged edge of disaster when postwar complacency saw us assume that the fight was won and that the submarine was an outmoded weapon. We cannot afford to chance disaster again.

Have We Forgotten?

With our traditionally short memory for defeats we want to forget—most of us have completely forgotten—those days of 1942 that saw the Axis sink ships faster than our wartime yards could build them. Then the glow of burning ships was seldom absent from our east coast. Our beaches from Atlantic City to Miami were black with the scum of fuel oil desperately needed for the decisive battles in Europe and Africa.

Iron crosses came easily to U-boat captains in those days. The climax arose in May and June when more than 260 ships were sunk by German submarines while anti-submarine forces all over the world could claim only 14 U-boats destroyed.

A valiant England, battered but victorious in the air, was on the verge of defeat because, while the air battles got the headlines,

submarines were getting the ships and supplies without which Britain could not survive.

U-Boats Grow Bold

And the British were unable to retaliate, for the U-boats, driven from Channel waters, were ranging arrogantly up and down our own East coast—often in clear view of the shore. The convoy system had won the anti-submarine war in 1917—we had assumed it would win in 1942. But a defeated Germany had improved both her tactics and her submarines, and the convoy system was not working. A statement headlined from the Truman committee report provided tragic summary of the whole anti-submarine picture:

"These sinkings exceed the combined Allied building in 1942."

In 1942 we needed a coordinated anti-submarine command—trained personnel—new weapons—new tactics—and we needed them fast. We were literally exhausting our supply of ships—and, even more serious, our irreplaceable supply of trained crews.

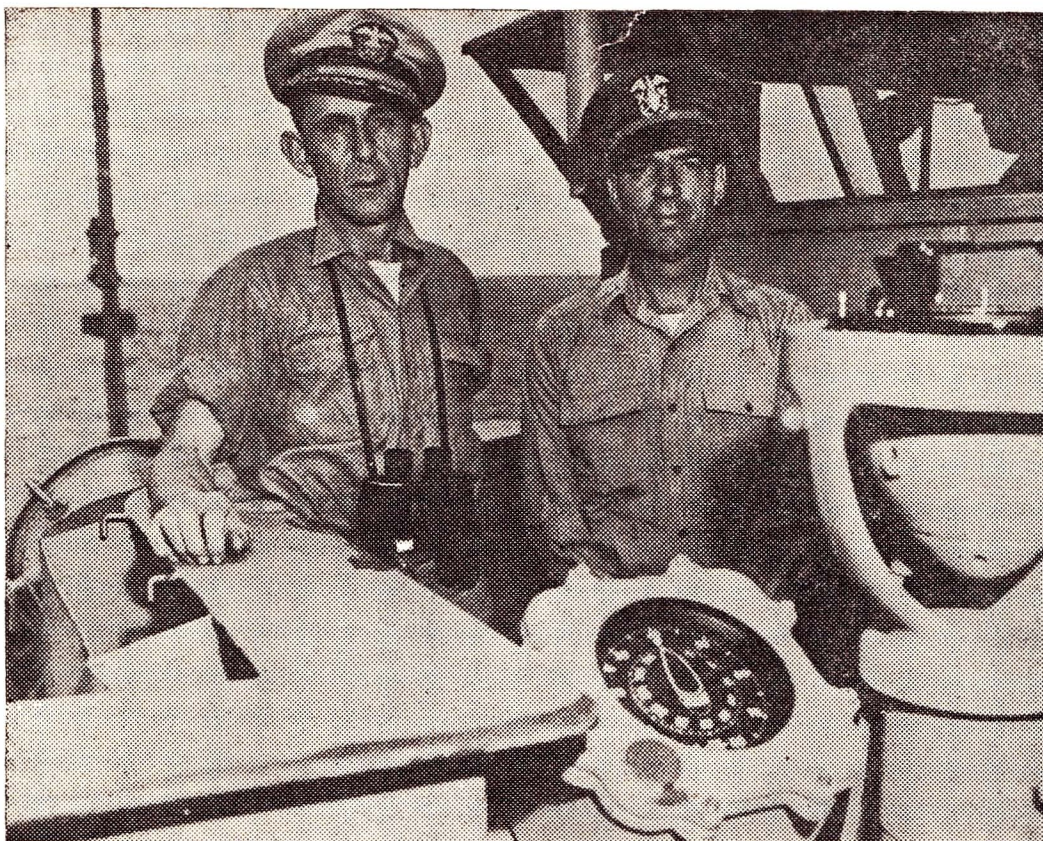
The job of licking the submarine was traditionally the Navy job, and with top priority given to anti-submarine warfare, action came with the necessary speed. To insure a coordination and concentration of effort which would mean a minimum of delay, there was formed an administrative fleet without ships, the Tenth Fleet. It was commanded by Admiral Ernest King himself, through his Chief of Staff, Admiral F. S. Low. To it was pledged the full power of the Atlantic Fleet.

New Weapons Are Needed

New weapons and refinements of those in use were urgently needed—research and development could provide them. But regardless of the weapons developed and the devices used, they could sink submarines only when brought to bear against the enemy by a well-trained ship or aircraft.

Two special units were made directly responsible to the Tenth Fleet. One, the anti-submarine warfare operational research group, was made up of civilian scientists. The other was the Anti-submarine Development Detachment (in Navy jargon, ASDEVLANT) charged with testing weapons, evaluating their tactical uses, and training squadrons.

ASDEVLANT soon became a roster of the great names in anti-submarine warfare.



The keen minds of capable U. S. naval officers direct the operations of the small carriers used against Nazi subs in World War II

Commander, now Captain, A. B. Vosseller, assumed command. Annapolis 1924, naval aviator, young, aggressive, "old navy" by background but "young navy" in that accomplishment came first, spit and polish second; he had commanded the Anti-submarine school in Boston, long been an able foe of the submarine. Commander C. M. Heberton was his executive officer.

Operations Officer Is Selected

From command of a Marine squadron in the Caribbean came the operations officer, Commander John W. Gannon. Under his direction, with the assistance of a young Annapolis graduate, Lieutenant H. D. Remington, was the training program which paid such rich dividends in enemy submarines sunk.

Development of new weapons—the American version of secret weapon in use in con-

trast to Goebbel's shouted secret weapons of words—was under Commander D. E. Wait. Tactics were the basic responsibility of Lieutenant Commander G. R. Fiss, product of the Navy's early aviation cadet program. Months before, "Doc" Fiss had matched wits with U-boat commanders, and won.

These were the men to command the special effort to destroy the submarine menace—professional Navy men, skilled in their profession. To help them came a strangely assorted variety of pilots and ground officers, an assortment common to America's wartime navy. Pilots included men who had sighted subs and sunk same, boys fresh from the great naval training programs.

Ground officers were typical of the naval reserve—here a lieutenant who had earned \$20,000.00 a year in civilian life, beside him another whose annual income had been barely a tenth of that sum. All were to be banded together in one effort; to smash the

submarine offensive. And all were convinced that air power could do the trick.

Tradition was cast overboard at once, and ASDEVLANT became a strange spot of apparent confusion on an otherwise orderly naval air base. Most naval air squadrons had a single type plane, but ASDEVLANT had a hangar jammed with every kind of naval aircraft, from stubby Grumann fighters to huge four-engine bombers. Most naval units were either air or surface, but ASDEVLANT soon had a respectable surface fleet of almost every known type, as well as its conglomeration of aircraft.

So, too, with its personnel. Baggy tweed suits and bald or gray heads were almost as common as naval uniforms in the huge hangar and sprawling collection of Quonset huts. Every resource the Navy could command was out to lick the submarine.

The first problem was to utilize air power with full efficiency against the U-boat. For aircraft are, by their very nature, ideally suited to offensive action against submarines. The submarine of 1943 was primarily a surface weapon and, when driven down, was largely impotent. Further, aircraft, by virtue of their great speed and maneuverability, could surprise a submarine on the surface and attack before it could submerge. Thus, with air power in full use, the submarine shadowing a convoy or patrolling a shipping lane was in constant danger of swift, disastrous attack.

First Results Are Small

In spite of this apparent use for aircraft in anti-submarine warfare, their record in America was far from impressive. Only 11 subs had been sunk by United States planes prior to 1943, and the toll of shipping destroyed showed no sign of abatement. Sound training and new tactics were required. Nineteen of every twenty subs attacked by aircraft in 1942 escaped to fight another day—but that record was to change with heart-warming speed.

Defective bombing permitted subs to escape, and so up and down the waters of Narragansett Bay and off Block Island plodded ASDEVLANT's Coast Guard cutters, towing targets at the rate of surfaced submarines while planes made practise bombing run after monotonous practise bombing run.

Many pilots had never before even seen an

undersea boat, so submarines from the great bases on Long Island Sound delayed their operational cruises to play hide and seek with aircraft while aviators learned the habits of the enemy and came to appreciate the tactical problem faced.

Pilots Cruise in Subs

Pilots, none too happily, to be sure—went out on the submarines for practise dives—saw the fearsome power of a diving aircraft from the submariner's point of view.

Submarine commanders, equally unhappy in most cases, took their turn in the air. In special search and attack exercises each pilot learned to use his plane to the full extent of its capabilities in an effort to outwit his submarine opponent. Soon trained Navy squadrons were to meet the Germans in combat all over the Atlantic—and win.

As the squadrons rolled out in a higher and higher state of readiness, the toll of ships sunk by U-boats reached a high mark and then receded, for in May of 1943 the Navy counterattack came and more subs were sunk than in any earlier two-month period—more than half of these by aircraft.

July of 1943 brought the first German counter measure to sustained air search and attack. Out came the German U-boat fleet that had been virtually withdrawn during June, with a new strategy and with new weapons. Heavy deck guns were replaced with clusters of anti-aircraft weapons. Now the Nazis were ready to accept the challenge of aircraft and fight it out. Not only was their guess a pretty questionable one to start with, but it became a catastrophic error as the Navy countered with increased fire power from its planes. For four action packed months the battle raged—submarines meeting aircraft attack on the surface, guns blazing.

Pilots Accept Challenge

Navy pilots took up the challenge with the same reckless daring that characterized all their combat operations. On two successive days one young flier, Lieutenant A. H. Sallenger, sighted surfaced submarines. He roared into his first attack through a hail of AA and sank the U-boat. He came through unscathed.

Back on the flight deck of the *U.S.S. Card*, the "jeep" aircraft carrier from which he was operating, he was contemptuous of

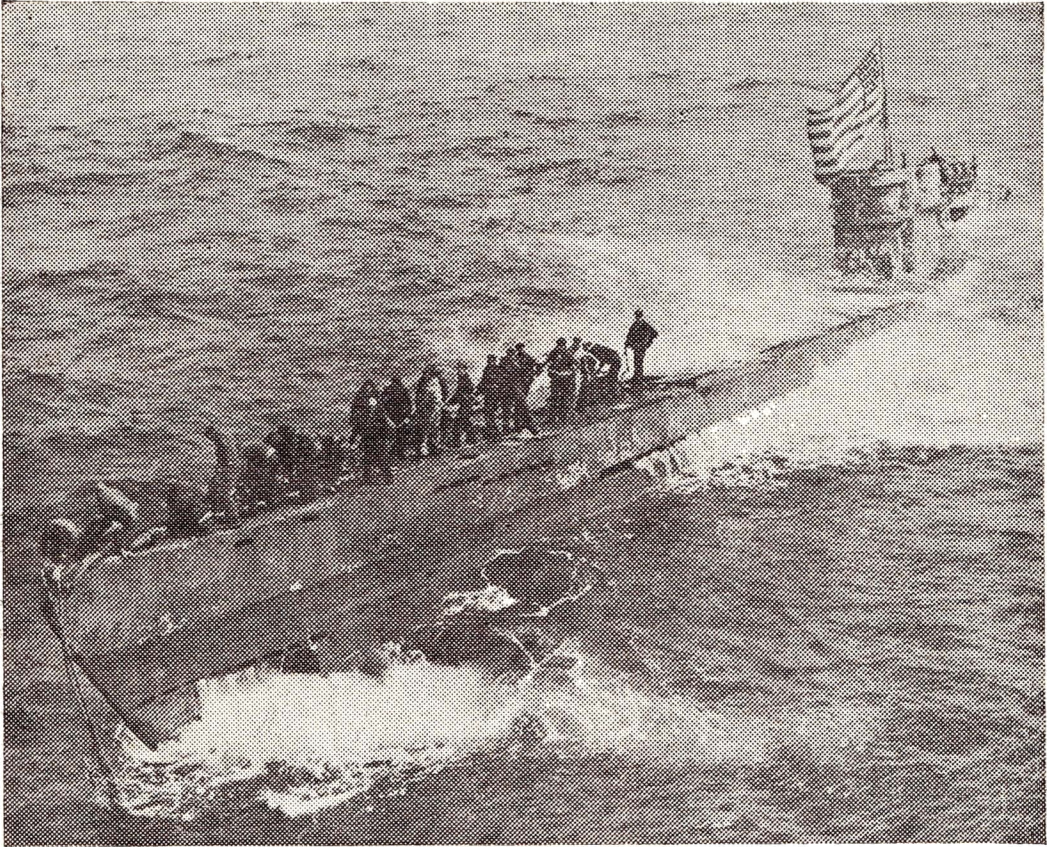
submarine gunners' accuracy. The following day he ruefully admitted to shipmates who spotted his rubber life raft that his judgment may have been a little hasty, for his second submarine had shot him down. Nonetheless, he held to his belief—and his record of four confirmed kills gives credence to his faith in aircraft weapons.

All over the Atlantic it was the same story. Almost daily the Germans learned that it

war! During those same months the U-boat offensive in the western Atlantic saw its greatest failure—for the subs sank fewer than 30 ships.

Germans Try New Torpedo

A German counter weapon or tactic was certain to follow. In October 1943, the first German acoustic torpedo smashed into an



Trained personnel man the captured Nazi submarine and make fast lines to tow it into port

made little difference where they attempted to operate—naval aircraft would find them. And be the plane a land-based four-engine bomber or a carrier-launched Avenger, the result was more and more often foredoomed. More than half of the attacks were ending in “sunk” or “probably sunk” assessments by conservative boards studying the evidence.

From July through October naval aircraft sank 33 German submarines—more than combined United States forces could claim during all of the preceding months of the

Allied convoy. Here was a truly fancy gadget, for it took the aiming problem out of the submarine picture and let the submarine fire with greater safety to itself and at the same time guaranteed an improved chance of a hit.

Attracted by the sound of the ship's propellers, the torpedo homed on that sound until the hit was scored. But, with an adequate research and experimental unit already in action, the Navy was ready to meet the threat.

Within a matter of days German commanders, closing on a convoy to fire their new weapons, heard a new and peculiar sound they dubbed the "singing saw." Puzzled and afraid the sound meant they had been detected, most drew back. Some of the more courageous fired anyway, but no sound of an explosion came to their ears.

Navy's "Singing Saw"

The "singing saw"—actually a simple gadget of steel bars towed behind the merchant ship and rattling like underwater castanets at the required sound frequency to attract the acoustic torpedo—was luring the deadly weapon to exhaustion. For the sound of the "singing saw" drowned out all ship's noises to the sensitive ears of the torpedo and it circled the castanets impotently—while the convoys went through.

In addition, constant air cover over threatened convoys made it more and more difficult for the U-boat even to gain position for attack. An integrated system of air support gave virtually solid cover to important convoys from port to port—land-based planes operating until the convoy was hundreds of miles from shore, where escort aircraft carriers took up the responsibility.

Frustrated by day, the subs went on the defensive—hoped for security and a chance to do some damage by night attacks. Again the Navy was ready with new and improved radar equipment, and with pilots trained to a standard of skill never before demanded in aviation history. Day and night operations of aircraft began from aircraft carriers as well as from land fields.

In addition, powerful searchlights were installed on anti-submarine planes of all types. The U-boat surfacing at night was no more secure than by daylight. First contact was made by radar, and then, as the range was closed to a little less than a mile, the brilliant beam was snapped on. Frozen with surprise—often blinded by the light—submarine crews had little chance to man their weapons before the bombs fell.

Enemy Subs Try Again

Still defensive, the Germans countered again. Since radar was required to find them, they equipped each submarine with a radar receiver which would warn of the approach

of the feared aircraft. Thus the submarine could submerge as the signal grew stronger and while the plane was a safe distance away. For a time the tactic worked. The subs were safe, although they in turn sank few ships.

Their respite, however, was brief. Pictures taken from aircraft when attacking submarines had shown the new device on submarine conning towers, and the "double domes" went to work. First it was determined that the device was a radar receiver antenna. Then out came "Vixen," a foxy little instrument to attach to our own aircraft radar.

When a target was picked up, "Vixen" automatically controlled the power output of the radar. The signal heard by the German U-boat thus would seem to fade as though the plane was heading *away* from the submarine even as it homed in to attack. So, "fat, dumb and happy," in the words of naval pilots, the U-boat waited for its doom. Again the Germans took their beating and by early 1944 they were losing two subs for every ship they managed to sink—a far cry from 1942!

Navy Develops Weapons

However, it's not enough merely to counter enemy devices and tactics. New weapons of our own were in a constant state of development.

Early in January of 1944 one of the newer escort aircraft carriers was running a special anti-submarine patrol in advance of a convoy enroute from Africa to England. Her air group was on its first operational cruise—a cruise that had been without incident. Gray early morning light saw the first combat patrol take the air.

Ten minutes later history was made, for this was no ordinary pair of Avengers searching ahead of the ship. Beneath the wings of these planes hung a new weapon—aircraft rockets.

Good-by, German Sub!

Here's the chronology of the attack:

0714—Launched anti-submarine patrol.

0720—Surfaced submarine sighted by Lt. (jg) McFord in TBF No. 32, who started approach, accompanied by Lt. (jg) Seeley in TBF No. 24.

0724—Lt. (jg) McFord made rocket attack. One probable hit.

- 0725—Lt. (jg) Seeley made rocket attack. Two hits. Submarine started to submerge, all but conning tower under. After hits by second rocket salvo, submarine fully surfaced and started left turn.
- 0726—Lt. (jg) McFord dropped depth charges straddling submarine at leading edge of conning tower.
- 0730—Submarine again started to submerge.
- 0731—Lt. (jg) Seeley dropped depth bombs simultaneously with submergence of conning tower.
- 0732—Submarine resurfaced, fifty degrees down by the stern.
- 0736—Large cloud of yellowish-green smoke arose from forty feet aft of conning tower.
- 0746—Submarine sank, ten degrees down by the stern, leaving no swirl or wake.

No Survivors Or Debris

There was almost as much awe as jubilation on the flight deck as McFord and Seeley came home, for there had been no survivors and almost no debris—only a mortally wounded submarine out of control and sinking after the swift rocket attacks.

Rocket attacks by another squadron were quick to follow. Even as McFord made his dive, another escort carrier cruised several hundred miles to the west.

Late in the afternoon five days later, two of this carrier's planes, on routine patrol, came on a scene that is the U-boat hunter's dream. Some ten miles away were two—possibly three—submarines lying side by side. Here was a refueler—"milch cow"—sub at work.

Down roared the two planes. Ensign B. J. Hudson had made the original sighting and led the way. Rockets blazed their way from the aircraft and two were seen to strike the larger U-boat, one tearing into the hull aft of the conning tower to come out through the deck.

Ensign Drops Depth Charges

At extreme low level, and in a dangerous glide, Hudson followed his rocket attack by dropping his depth charges, landing one squarely between the submarines, and made a violent pull out to avert a crash. Circling

the scene he saw scores of men leave the submarines in panic-stricken haste and hurl themselves into the water.

Now down came Ensign W. M. McLane, adding his Buck Rogers note to the scene as flaming rockets struck into the still surfaced submarine. His bomb drop was accurate as well, and first the smaller, then the larger submarine slid beneath the waves leaving dozens of Germans swimming in the debris.

Here was a weapon of sensational value—used three times by Navy aircraft, and three submarines, in the words of our ultra-conservative assessment bodies, "probably sunk." But even more significant than the attacks themselves were the events leading up to them, for this completely new weapon for anti-submarine warfare made its kills only five months after first test firing of experimental rockets!

New Rocket Is Developed

The Navy began development of a rocket program in July, 1943. Test firing of the first Navy forward firing rocket occurred in California on August 20. Recognizing the potentialities of the weapon in anti-submarine work, the problem of developing needed equipment and of determining tactics and of conducting training came to ASDEVLANT.

Working with top speed, a range was built on Nantucket Island. Test flights were flown, sights developed, aiming allowances computed, all theory checked by firing from ASDEVLANT planes. In a voluntary censorship that worked, the islanders kept the Navy's secret. By December first the first squadron destined to use the new weapon against the enemy was fully trained. December 15 saw them at sea, and in January the weapon—and training—proved itself. Aircraft rockets were in anti-submarine warfare to stay.

The rockets may have frightened the Germans more than any other weapon or device, but it was another gadget that really drove them to distraction, for they never quite figured it out. The expendable radio sonobuoy proved to be almost the top surprise of World War II.

Once submerged after aircraft attack, a U-boat skipper felt secure. But, suddenly, in late 1943, that security vanished. Hours after submergence the submarine periscope would cautiously emerge only to find planes still circling overhead.

Sono-Buoy Tracks Subs

The explanation was use of the sono-buoy. When the submarine submerged, aircraft would lay a pattern of these buoys around the point of submergence. Each was a miniature broadcasting station transmitting underwater sounds to the receiver in the aircraft. Each had its own special frequency, so that there was no doubt as to which buoy was heard.

Thus, as the submarine moved away from the point of submergence, listeners in the plane would hear the U-boat's propellers and could, in a sense, "track" it on its escape route. In some cases contact was held for hours until surface craft reached the scene.

As contact with the enemy grew more and more difficult to make, the sono-buoy took on ever increasing importance. It made joint air-surface attacks possible. Aircraft, with their speed and range, often made the original contact and attack. If the submarine was not sunk, contact was held by means of the sono-buoy until surface units were able to locate and destroy the enemy.

Ceaseless Hunt Goes On

In 1944 roving task groups hunted submarines by day and by night. Actions lasted for as long as 78 hours against a fighting and able U-boat, but more and more often the result was certain:

"Task Group 21.5 sank one Uncle Boat Latitude 40°16'N, 13°58'W after joint air-surface action. Survivors including captain are being landed at Casablanca."

The task group led by the aircraft carrier Guadalcanal provided fitting climax when in June, 1944 they captured a German submarine abandoned under attack by its terror-struck crew, and towed it into Bermuda.

The Germans were far from ready to give up though, and they now came out with their own prize development. The submarine of 1943 had to surface to survive. Electric power drove it under the surface, and batteries were soon exhausted. By late 1944 the Germans partly reduced this weakness with an ingenious arrangement they called "schnorkel" or snout, an ungainly contraption mounted on the conning tower like a huge stove-pipe periscope.

It provided both an air intake and an exhaust vent, and so enabled the submarine to operate at periscope depth on the same

diesel motors it used on the surface. There were many weaknesses to "schnorkel"—crews didn't like it, it caused a defensive attitude among submariners, it was unusable in rough weather—but it meant relative safety from air search and attack. Nevertheless, "schnorkel" thwarted the Navy's avowed purpose—to exterminate the U-boat.

How to Find A Schnorkel

Already ASDEVLANT was at work on the problem—how to find the schnorkeling sub. From its tests came one of the wildest yarns of the war. We, of course, had no subs with schnorkels, so to conduct experiments, ASDEV needed a dummy. It's no small job to build a self-propelled dummy smoke-stack in the water, but finally it was done.

The gadget failed to function perfectly on its early trials, and the builder, a nationally famous yacht designer, out-schnorkeled the schnorkel. On his he built a special platform on which he might ride to check the performance of his brain child. Solely in the interests of practical design, said platform was a bicycle seat—pedals provided a footrest as designer Burgess rode his strange craft.

Sea-Going Bike

First warning the Coast Guard at Newport had that ASDEV was off again, was the sight of what appeared to be a man sitting in the middle of Narragansett Sound. The skipper of the CG83374 first saw him and turned to the duty officer.

"Look, I may be crazy, but I think I see a man out there!"

Ordered to investigate by the outraged duty officer, the harbor patrol raced out to the apparition. Close up it looked even worse to the coast guardsmen's dazed eyes—there on a bicycle seat, moving majestically across the Bay was a dignified, elderly gentleman in a tweed suit—handlebar mustache waving gently in the breeze of his own progress.

Slowly Dutch Weiland wheeled his boat alongside. With a courtly bow the old gentleman doffed his checked cap.

"Good morning, sir," he said, and continued across the Bay. Without a word Dutch cruised back to his base.

"Send someone else to investigate," he said. "For me, it's just ASDEVLANT again."

And so it was, but eventually the answer to the schnorkel was worked out and again the U-boat found it had met its master. New and improved radar picked up even the weak echo from the "smokestack" and new search plans were built on the ranges determined.

Blockading A Whole Ocean

But all the Navy's work was not defensive—two daring concepts on the offensive helped finish off the U-boat's last chance. One was the use of aircraft carriers as offensive weapons and the other was a blockade of an entire ocean. Both worked.

For the first genuine courage was required. During the early years of the war carriers had taken a terrific beating. Used for convoy escort, they had been regarded as an emergency necessity, but all on board slept in life jackets. Now it was proposed to send them out to look for submarines, not to avoid them.

Carriers Begin to Hunt

Whatever the risk, the gamble looked good to Tenth Fleet. Driven from the East Coast, the subs had formed into huge packs in mid-Atlantic, decimating convoys out of the range of land-based aircraft. So, straight into the wolf-packs, ploughed the jeep carriers—the *Bogue*, the *Card*, the *Santee*, the *Croatan*, the *Core*, and later the *Block Island*, *Wake Island* and *Guadalcanal*. The result was spectacular victory for the CVE's and for air power, for while the *Block Island* was eventually lost, more than 30 submarines fell to CVE task groups, and there was no "safe" area left in the Atlantic for a German U-boat.

The second undertaking offered less risk, but seemed almost fantastic—it proposed to blockade the South Atlantic by flying bar-

rier patrols from South America to Africa. Two things made it possible—a base on Ascension Island and the finest long range bomber squadron in the world, the Navy's VB-107.

Weaned on PBY's, and flying the longest patrols ever flown in these venerable Navy standbys, the squadron had graduated to B-24's (PB4Y's to the Navy) and was ready for its supreme test.

In the coming months it met and passed that test. CVE's could go out and get submarines—the Ascension-based squadron had to wait for the subs to come to them. Nevertheless, they matched the record of the finest CVE squadron, and wiped out an entire flotilla of German blockade runners in the bargain. No small part of their success lay in the courage of the pilots, men like Squadron Commander Prueher, who gave his life in an attack on three enemy submarines some 1500 miles from his base.

So it was, in 1944, that the Navy seemed to have doomed the submarine to oblivion. Then, from sources still unrevealed, began to come rumors of the first true submarine in history—a ship able to remain submerged indefinitely, as fast submerged as an older submarine on the surface, capable of extreme ranges. V-E day caught the Germans with that submarine still not operational. But it's the U-boat of tomorrow's war, and let's not forget that as late as May 6, 1945, a ship was sunk just off Block Island by a German submarine!

True, that submarine paid for the attack with its life, but it was a *prepared* Navy that got the last Navy kill of the war, and in 194?—what nation would not, if necessary, sacrifice 50 submarines for 50 atomic bombs on American industrial centers?

Not one of us wants World War III—but if it comes, let's not lose it. Let's not sell anti-submarine warfare short.