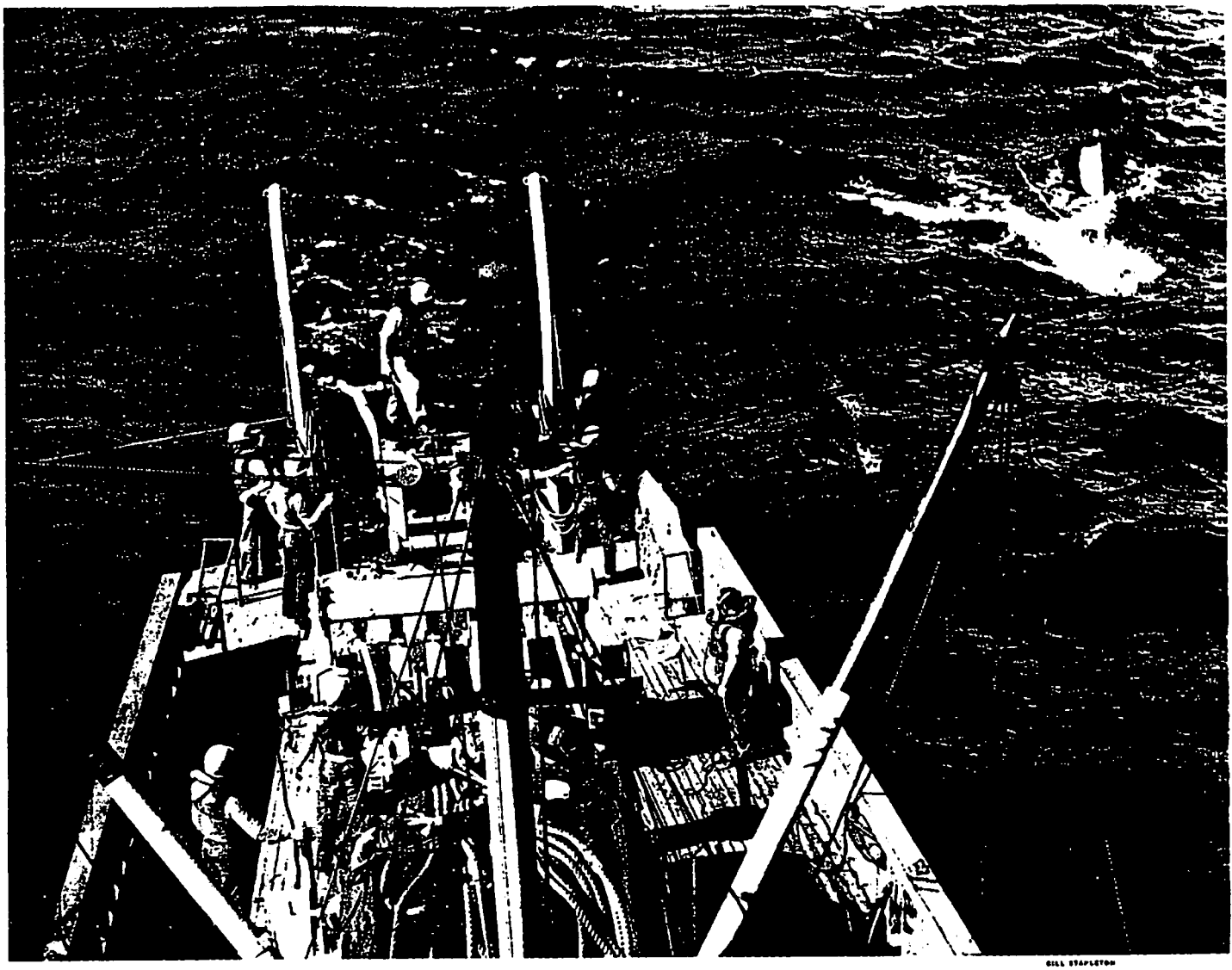


BILL STAPLETON

Combat-ready crewmen on the tiny Osprey launch mine-sweeping gear in Korean waters. Floating "pig" (right) keeps guide lines taut

Men of the Mine Sweepers

"Where the fleet goes, we've been!"

By CHARLOTTE KNIGHT

Collier's War Correspondent

Korea

IT WAS a grim morning and an even grimmer mission. Cold, driving rain stung our faces and beat hard on the decks of our plucky little mine sweeper, the Osprey, as we left Korea's fog-shrouded west coast and headed into a mined, "unswept" channel in the Yellow Sea. We were on the hunt for the most insidious weapon UN forces have encountered in 17 months of the Korean war: the magnetic underwater mine.

Like most mine sweep missions in this war, this was another urgent, top-priority, sweep-it-right-now assignment. Intelligence sources, evaluated as reliable, had produced information that Communist forces had laid several magnetic mines in the channel of Chawŏl-To, one of the approaches to the vital UN supply port of Inchon. The Osprey and two of her sister sweepers, the Swallow and the Waxbill, had been suddenly diverted from their major sweeping operations off Wonsan on the east coast and ordered to steam full speed for the Yellow Sea to take care of the situation. It was up to them to locate and explode the dread mines—or be able to assure our high command that the mines had become inactive and were therefore no longer a threat to UN warships.

A few mines, stealthily laid at night by innocent-appearing sampans and fishing junks, could put an immediate and very likely disastrous end to our naval operations in the vicinity, unless we first took appropriate means to counter them. Of these methods, that of physically sweeping a given area clear of all types of mines still is, after almost half a century of coping with the mine as an offensive weapon, the most effective countermeasure.

It is hazardous work—as Navy casualty figures offer somber proof—but danger is the Osprey's business and her crew takes it in stride.

On the bridge, her skipper, Lieutenant (jg) Philip Levin, of Philadelphia, set about his job with quiet efficiency and an air of calm which seemed to spread to the entire ship's company. If they were jittery, they concealed it amazingly well.

Not that anybody on the Osprey had any doubts about what could happen. For these are the sobering statistics to date: 17 of our ships have been hit

Unsung sailors who clear the seas for UN shipping account for only 2 per cent of Navy men in Far East, over 20 per cent of Navy dead

U.S. NAVY PHOTO

As the USS AMS-34 steamed by, this South Korean-manned mine sweeper was destroyed by a mine off Wonsan, Korea

This sign greeted UN forces at Wonsan beach. The mine sweeping men are termed: "vikings of the modern Navy"

U.S. NAVY PHOTO

by Communist mines since the start of the Korean war; the deadliness of the weapon can be attested by the fact that 12 of these vessels sank, and one of them, the destroyer Walke, suffered severe damage and 26 of her crew killed in the Navy's worst single disaster in Korean waters. Six of the ships sunk were UN mine sweepers; four were American. The Magpie, the first U.S. Navy sweeper lost, went down a year ago, with 21 of her small crew of four officers and 29 men missing in action.

Since then (although those who man the sweepers comprise less than 2 per cent of naval personnel in the Far East), more than 20 per cent of all naval dead or missing have been mine sweep people.

No Push-Button Gadgets for This Job

"Until we can come up with a classy, remote-control, push-button sweeper, looks like we'll have to keep on doing it the hard way," said one of the Osprey's officers as the little ship rocked and rolled on our way toward Chawŏl-To, past the stately Los Angeles, the Eldorado and some of the other great gray warships. Our 136-foot wooden craft suddenly seemed absurdly small. As though he read my thoughts, Lieutenant (jg) David A. Beadling, of Prospect Park, Pennsylvania, the Osprey's executive officer, sprang to her defense. "Yeah, I know. I suppose we do look pretty silly alongside those steel jobs." (I was shortly to discover that to all mine sweep personnel, everything from a small destroyer to a battleship falls under the simple classification: "steel job.")

"I suppose they have a right to think they're pretty important—they're the only ones you read about; and nobody ever heard about the Osprey. But you ought to see 'em run for cover the minute they smell a mine field. Yes, sir," reflected Beadling with what appeared to be some satisfaction, "there's nothing like a few mines strewn about to cut the big boys down to size."

"Don't forget our motto," prompted Lieutenant (jg) Gordon Shoolman, of Rochester, New York, "'Where the Fleet Goes, *We've* Been!'"

"It may become apparent after a while that we don't quite consider ourselves part of the regular Navy—or maybe it's vice versa," continued Beadling, known aboard the Osprey only as "the Beadle."

"For instance," observed Shoolman, "when it comes to food and supply, the Navy's got mine sweepers listed *after* 'combatant' ships. What the hell do they think *we* are?"

Like any group of proud people whose jobs are specialized, dangerous, virtually unpublicized, and frequently unrecognized even in their own service, the mine sweep personnel are inclined to be a bit hypersensitive. Slights and rebuffs are apt to be long remembered. As we chugged out of Inchon Harbor, it became apparent that the humiliation suffered at the hands of one of the big warships in this very spot during the amphibious landings just over a year ago still rankled. On that occasion, it was recalled, the Osprey was steaming along in her usual cocky fashion when she intercepted a blinker signal from one "steel job" to another.

The message, which clearly referred to the tiny wooden craft, the only one of its kind around at the moment, read: "Stand by to take tug alongside."

The Osprey's men were slightly agitated. The saucy sweeper blinked the warship right off the light waves with an indignant retort: "WE AIN'T NO TUG!" and bounced on its way.

The marked disdain the Osprey's crew felt for the Navy proper was not surprising. Conversations with mine-force people over a period of several weeks had already convinced me this feeling was general. That it was not without some basic justification has been all too dramatically proved by events themselves this past year.

Almost at once, the Korean war exposed the critical neglect of our mine force. All departments of the Navy had suffered as a result of the administration's pre-Korea policy of economizing on defense by "trimming off the fat without cutting the muscle." But the mine sweepers were hit perhaps hardest of all. We were way behind in men, in equipment and in research.

During World War II, we had 150 to 200 mine sweepers in the Pacific alone; but when the Korean campaign began, our sweeper force in these waters consisted of four 221-foot, steel-hull Fleet Mine Sweepers (of which three were in "caretaker" status), and six wooden Auxiliary Mine Sweepers. Ninety-nine per cent of our mine sweep personnel in the last war were reserves; but, since 1945, we had done almost nothing to build up even a small nucleus of trained officers and men. Similarly, there had been so little emphasis on improving our sweeping gear or developing new mine sweeping techniques that we were right where we were five years ago.

At the expense of lives lost, ships sunk and entire invasion forces stopped cold, we learned here in Korea the bitter lesson of underestimating the dreadful capabilities of mine warfare. Firsthand, we have already had an unpleasant foretaste of what we are most certainly going to be up against in any war with the Soviet Union.

The prospects are somewhat terrifying. Lieutenant Commander Darcy V. (Dusty) Shouldice, of Oakland, California, then commander of Mine Division 31, had dwelt upon a few of them as he talked to me aboard his flagship, the Mainstay, a few weeks before. "Look what happened at Wonsan in October, 1950," he said. "We ran smack into 3,000 mines, one of the most concentrated fields in history. Fifty thousand men were all set to come ashore some 80 miles above the 38th parallel, on the east coast; there were all those ships waiting to get in to support the land invasion by South Korean forces. They couldn't budge for eight solid days after the original D day, until we'd swept some safe channels for them.

"Don't you see what a few enemy mines can do?" Shouldice continued. "All the carriers, battleships and cruisers we've got won't do much good against the Commies, unless we're able to land troops ashore, supply them and get our warships close enough to give them fire support.

"Have you thought, for instance, about what would have happened to our famous Pusan perimeter if the Commies had dropped a few mines around, here and there, when things were so critical? I used to lie awake nights worrying about how just one stinking submarine, carrying 32 mines (special mine-laying subs can carry as many as 50), could have tied up our whole effort and ended our perimeter. Just because the *possibility* existed, we had to check-sweep it every day."

The Enemy Can Harass Us Cheaply

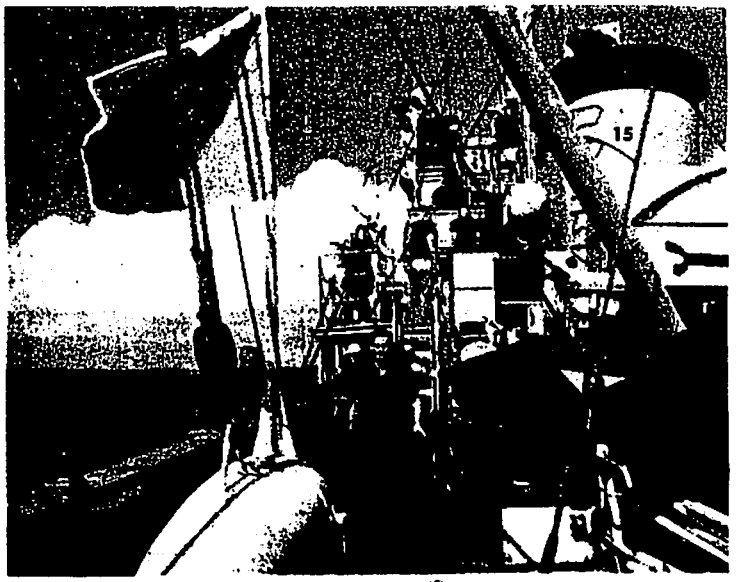
Dusty Shouldice was talking shop now and nobody talks it more convincingly. "Look," he said, "we have the world's most powerful Navy and we have no equal in amphibious operations. The enemy knows this only too well. But see how fast and how simply he can neutralize our best effort, even though he has no surface forces of his own. And how cheaply. It's the most inexpensive type of war.

"Mines are easy to mass-produce. Why, any toy factory or typewriter plant could turn 'em out in quantity and at very low cost. It's damned frightening."

The commander's words were reminiscent of those of the late Admiral Forrest P. Sherman in his testimony before a Congressional committee shortly before his death. When the committee chairman pointed out that the several hundred mines the U.S. Navy had swept in Korean waters must have made serious inroads in the Communist mine supply, Admiral Sherman said: "Well, sir, I would like to be that optimistic, but I'm afraid they can *(Continued on page 66)*

COLOR PHOTOGRAPHS FOR COLLIERS BY BILL STAPLETON

Veteran sweeper Lt. Commander "Dusty" Shouldice, of Oakland, Calif., led Mine Division 31 in Far East. He earned the Navy Cross at Wonsan



Osprey crewmen hustle to their stations in heavily mined waters. It's guessed we've swept up less than half of the thousands of enemy mines

The Osprey's Philadelphia officers map strategy. Lt. (jg) Phil Levin (front) is ship's skipper; Lt. (jg) Dave Beadling is executive officer

Norton Hampton, of Roxbury, Mass., attaches a cutter to a sweep line. Arranged about 250 feet apart in the water, cutters sever mine cables

Between trips on his Incredible, Lt. Edward Flynn, of Ozone Park, N. Y., watches sailor Ernest Mosier, of Davenport, Iowa, paint fangs on "pig"

Electronics Technician James Staples, of Seattle and the Osprey, wears his talking gear. Sweeper personnel have won over 250 awards in Korea

Men of the Mine Sweepers

CONTINUED FROM PAGE 14

probably be manufactured at a rate just as fast as our recovery of them."

The enemy has laid thousands of mines around the coasts of Korea, of which we have so far swept less than half, despite continuous dawn-to-dark operations. Ninety-eight mines were "cut" recently in one day, just off Wonsan alone.

Exactly how these mines have been laid is the subject of much speculation among mine-force people, but it is generally assumed that most of them reach their destination by means of small boats or fishing junks. "We were so used to modern methods of mine laying, such as by aircraft or submarines, that we weren't prepared to cope with something as primitive as the sampan fleet," observed one mine officer.

"The whole idea gets grisly after a bit," said Commander Shouldice. "Some mines weigh as little as 750 pounds. So, a few coolies can pick one up and walk off with it. They can put four of them on a fishing boat with no strain at all. Or they can suspend a magnetic mine underneath an ordinary sampan by putting a few lines (which look like fishing lines, of course) over the side and conceal it that way. When they get the boat in position, they merely cut the lines and drop the mine."

To prevent this sort of thing, we naturally maintain a constant vigil, day and night. Task Force 95, the UN Blockade and Escort Force, under the command of Rear Admiral George C. Dyer, of Chevy Chase, Maryland, has a "flycatcher" patrol whose job is to intercept—and inspect—these small craft. But it is physically impossible, especially at night, to keep some of them from slipping through the blockade and seeding some mines.

With few exceptions, all the mines swept have been the common, moored "contact" mines—mammoth spheres with protruding "horns" which detonate the explosive charge when they come in contact with a ship.

To date, the best method of sweeping these moored mines is for a vessel to tow from her stern two Oropesa or "O"-type sweeps: these are steel wires stretched out from the port and starboard beams by steel "kites" or "otters" which are designed to submerge the sweep wires at the required depth and keep them there; they are attached to Oropesa floats, torpedo-shaped affairs known in mine sweep parlance as "pigs." These floating "pigs" stream out at an angle from the ship and keep taut the kite lines, along which are arranged, about 250 feet apart, series of cutters capable of severing the mooring lines holding the mines in position.

Rifle Fire Will Sink Mines

When these lines have been cut, the buoyancy chamber within the submerged contact mine brings it to the surface, where it bobs about until destroyed by mine sweep crews, usually by rifle fire. (It isn't necessary to hit the horns or explode the mine; filling the buoyancy chamber with rifle holes is sufficient to send the mine to the bottom, where it stays.)

In normal operations, one of the mine sweep ships acts as a "destruck" vessel—a special job which is rotated among the sweepers. Equipped with rifles and 20-mm. guns, it "stooges around" the swept area and sinks the floating mines. Another ship draws "danning" duty, that of dropping dan-buoys at the end of each sweep so that the exact area cleared is plainly indicated.

Mine sweep ships operate in one of two kinds of formations: wide open, or "pig-to-pig"—that is, several ships abreast, obviously covering a maximum area but exposing all of the ships to the same dangers; or the protected formation, which results in maximum safety for the ships but minimum sweeping cover. By using this latter technique, developed in World War I, ships can proceed behind one another in a staggered formation so that all except the lead ship are protected by the sweep of the ship ahead. Obviously, this means some overlapping.

Time is the factor that determines the kind of operation a mine sweep commodore shall employ. "Naturally we can get the job done a lot faster with an open formation," explained Commander Shouldice. "Generally, we're being rushed, and sometimes we have to sacrifice the safety factor."

By and large, mine-force officers feel that their problems were not made any easier—at least in the beginning—by the lack of understanding all too frequently encountered among the high command concerning the capabilities and limitations of the sweeper craft. From others I had heard how Shouldice had suddenly been called back to Tokyo some months ago to get his orders for a forthcoming landing operation. The admiral in charge of those particular plans briefed the mine officer.

"We figure you should be able to sweep the area in four hours," he told Dusty, "so your ships will go in at H hour minus 4."

The salty mine commander exploded. "Four hours!" he said. "My God, sir, it would take—at the absolute minimum—*six days* to sweep that area!" Dusty has been in the Navy for 24 of his 42 years, doing just about everything as he worked his way up from "swab hand" to lieutenant commander, and his practical approach to problems and plans is not how good they look on paper, but simply "Okay, but will they work?" His forthright speech does not especially endear him to his superiors; but his husky, unforgettable voice, emerging from a six-foot 200-pound frame, has a ring of authority which makes them listen. And they also know by now that when Dusty says he will do something, they don't have to worry about it any more.

On this occasion, the admiral blinked and caught his breath for a moment. Then he looked at the calendar. "Six days, um? Well, today is D day minus 6. Guess you'd better get started." He called an aide. "Get Commander Shouldice to the airport as fast as you can. He is returning to Korea at once." The job took exactly six days, working at top speed.

Orders From the Navy Brass

"We kept on getting orders: 'Sweep this area instantly!' " said one of the mine people, "when sometimes we wouldn't even know if the beaches were in friendly hands. We're small so that we can maneuver close to shore, but we're also slow. We'd ask the brass: 'What if the shore batteries start firing?' 'Very simple,' they'd say. 'Duck 'em. Take evasive action.' At *eight* knots? Good grief!"

Sweeping up enemy mines is unpleasant enough even when the beaches are "ours." Add to this the ever-present fire from enemy shore batteries and you have Wonsan—exactly as it has been for the better part of a whole year, except for the comparatively short time when UN forces held that important North Korean port. Neither Dusty nor anyone else in the mine force here is likely to forget those first sweeps.

Captain Richard T. Spofford, of Malden, Massachusetts, then commanding Mine Squadron Three, the Far East's mine force, described the situation: "The mine field ran 30 miles to sea. Altogether, the enemy had mined at least 400 square miles. The first sweep ran into such heavy concentrations, I could see we would never get there. Everything was tried to clear the way. Planes

"I can't make up my mind how angry I am with George . . . fifty or seventy-five dollars worth!"

COLLIER'S — WILLIAM VON HEGEN

dropped 1,000-pound bombs to set off the mines, but that was ineffective. Underwater demolition 'frogmen' went ashore to hunt mine-control cables, but had no success."

Lieutenant Edward P. Flynn, Jr., of Ozone Park, New York, skipper of the Incredible, told me what happened on October 12, 1950:

"It was the third day of our Wonsan sweeping operation. We were determined to get our noses in. By about 10:00 A.M. we had got in between Rei-to and Kodo-to, a couple of the islands that guard the approaches. The Pirate, commanded by Lieutenant Commander Bruce Hyatt, of Albuquerque, New Mexico, the OTC (officer in tactical command), was lead ship; the Pledge (whose skipper was Lieutenant Richard O. Young, of Inverness, Florida) was second in the formation; the Incredible followed. The Kite and the Redhead were danning. Commander Hyatt said he was going to get in as far as he could. He was getting sonar 'pips' and echoes all over the place so he knew he had a good field.

"At 1154, the Pirate cut six moored mines with her gear," he continued. "Three or four minutes later, the Pledge cut three, and the Incredible cut four. And then, suddenly, the Pirate got hit in the starboard quarter. She foundered awfully fast, thrashed from side to side and sank in three minutes. Six men were lost and there were a lot of wounded."

Then the formation really started having trouble. "The shore batteries opened up from Sin-do and Rei-to with their 75-millimeters," Flynn went on. "They had an angle on the ends of two islands and therefore had us bracketed pretty closely. The Pledge took Sin-do under fire with her three-inch gun and the Incredible took Rei-to. The Endicott (our fire-support vessel) stayed outside the mine line and opened up with her five-inch guns, but still couldn't silence the island batteries. (We called for air and, 45 minutes later, our planes knocked them out.)

"After the Pirate sank, the Pledge's skipper, Lieutenant Young, said: 'We'd better turn around and get out of here.' He turned left about 15 degrees and I turned right. Then the Pledge hit a mine under the ship's wardroom just about the same time a shell hit it in the CIC (Combat Information Center) and killed a radar man. Young had broken his leg, but he kept hobbling about inspecting the ship and her men. The vessel stayed afloat about 45 minutes and then sank."

Lieutenant Young's official report says in part: "The starboard side of the hull, just forward of the superstructure, was rent from below the waterline to the topside. The deck was sheared from gunwale to gunwale. It was evident that damage throughout the ship was of such a nature as to prevent saving her from sinking. The silence that reigned throughout the ship indicated that casualties were very heavy. I therefore gave the order to abandon ship."

With One Engine Gone—

The remaining ships put boats in the water and began picking up survivors. The Incredible turned right and started to back out. "About that time I lost my starboard engine and my number one generator," said Flynn, "so I had to go through the mine line on one engine. We had cut 14 mines and they were still floating around. Then all of a sudden I lost *all* my generators. We were under direct fire from shore batteries —and we were stopped cold. It was very embarrassing. Then Dusty came alongside, with the Chatterer and the Mockingbird on either side, and towed me out.

"They say a mine sweeper can't back up. But we did."

Ever since her almost miraculous escape, Flynn's ship has been known as the "Incredible Incredible."

For his heroic work in leading his ship into densely mined waters to rescue the survivors of the Pirate and the Pledge, and for towing the Incredible out with no casualties to his crew or damage to his ship, Dusty Shouldice was awarded the coveted Navy Cross. And there isn't a man in his outfit who wouldn't pin a dozen stars to it.

Finally, by October 18th, the date which had been set as D day for the landings of our troops at Wonsan, the mine sweepers had cut what they had every reason to believe was a clear channel right to the beach. But on that day, mine sweeping suddenly took a new and terrifying turn.

"It had been duck soup all day," Dusty recalled. "We had one hour to go to give the high command the go-ahead to let the big ships come in. They had said: 'We want it by 1600 hours, Dusty,' and I said: 'I'll give it to you by 1500' and we would've, too—and then, damn it, we ran into this 'influence' field. I was in the Mockingbird; the Redhead was ahead of us and the magnetic field around one of her otters triggered an 'influence' mine and set it off. That explosion set off a second mine next to it. Then a couple of ROK (Republic of Korea) mine sweepers got it, and one of them blew sky-high. And, of course, there went the 'clear channel' we'd promised the brass. It was sure disappointin'."

Invasion Troops Had to Wait

The high command must have had some stronger words for it. The accidental discovery of just three or four magnetic mines —mixed in with the others in the channel— had neutralized for the time all their plans. Until the whole area had been thoroughly swept all over again—this time for *magnetic* mines—the amphibious force couldn't budge. It took another eight days—while the other ships just sat there. Meanwhile, of course, Wonsan itself had been captured by the Republican 3d Division, and our invasion force was never in serious jeopardy.

"But suppose it had still been held by the enemy on October 18th," observed one of the mine-force men. "Then you can see what we mean, about the mine being an offensive weapon of blockade."

The presence of magnetic mines in Korean waters was sufficient to frighten even a veteran like Dusty Shouldice. "Mines never really scared me until that first 'influence' mine blew up in Wonsan. And none of us has really been able to erase the element of fear since then."

The magnetic mine (a category entirely different from the moored contact type) is one of the "influence" mines, so called because they are activated by some specific property of an approaching ship—acoustic (tripped off by the noise of the propellers, for instance), magnetic, pressure, photoelectric or the like. Actually, there are no limits to the grisly possibilities; an inventor can mix them, for example, so that you get bizarre (and almost unsweepable) combinations of magnetic and acoustic mines, or acoustic coupled with pressure—and so on, until, as one of the mine sweep people said: "It drives you nuts just thinking about it." And the enemy, if he really wishes to be difficult about it, can set mines so that they do not become active until days after an area has been declared "swept." (Hence the necessity of continual "check sweeps.")

Influence mines are colloquially called "mudders" or "luggers" because they sink directly to the bottom of the sea and do not require any mooring lines or buoyancy chambers to keep them in a position where they will have physical contact with a ship. This complicates the sweeping problem, obviously, since they cannot be "cut" with ordinary sweep lines.

United Nations forces have captured intact some of these magnetic mines in Korea and have reported them to be clearly of Soviet manufacture, well constructed, extremely sensitive, and certainly equal in many respects to anything we have along this line.

In addition to the fact that the mines are of Russian manufacture, there are reports that Soviet advisers instructed a few North Koreans as to how to lay influence mines and then, to insure secrecy, later shot them. Admiral Sherman himself was credited with the statement that we have evidence that

many of the Russian mines had been laid in Wonsan prior to June, 1950, when the Korean war broke out.

While the current form of the mine itself is more than 350 years old, the magnetic mine is of modern vintage: its first use in warfare was by the Germans, when *Luftwaffe* planes laid several of them along Britain's east coast in late 1939. Several Allied ships were sunk before the British, working at top speed on the project, developed some countermeasures. In general, there still are just two: self-protection of the ships and sweeping of the mines.

The first countermeasure is known as "degaussing" a ship. (A "gauss" is a unit of magnetic field intensity named after Karl Friedrich Gauss, an eminent German mathematician.) Every metal object (such as a mine) has magnetic properties. When another object with different magnetic properties (a ship, for instance) gets near enough, a disturbance is created with triggers off the mine. To degauss a ship, coils or "girdles" are placed around its hull and very strong countercurrents are passed through them, theoretically making the vessel magnetically "nonexistent." The method, however, is not infallible.

When it comes to the other measure, that of sweeping magnetic mines, the problem is simply one of exploding the mine by deliberately producing a very strong magnetic field at a safe distance from the sweeper.

And that is precisely what we, aboard the gallant little Osprey, intended to do that dreary day when we sailed out of Inchon.

There were two of us on the mission; besides the Osprey, we had the Waxbill, whose skipper, Lieutenant J. W. Janecky, of Minneapolis, was OTC. (All the small sweepers, by the way, are named after birds. "Why?" I asked one of the sailors. "Beats me," he said. "Guess some joker in Navy headquarters belongs to the Audubon Society. Can you think of any other reason?")

Warning Signals Are Hoisted

We were nearing So Sudo channel. "Hey, you guys," shouted one of the men, "give me a hand with those sweep balls." Visible for some distance, these black rubber balls are hoisted during sweeps as the international signal for sweeping. Signal flags were already at code Howe Fox: "Engaged in mine sweep operations. Keep clear."

There were no fancy communications aboard ship. The skipper, Lieutenant Levin, called his instructions through a wooden tube on the bridge. "All engines ahead one third." We were coming alongside the island of Palmi-do and very soon would be ready to sweep.

Lieutenant (jg) Lloyd Lauderdale, of Beaumont, Texas—a graduate of the Mine Warfare school at Yorktown, Virginia—was the mine sweep officer, which meant that he was in charge of the sweep detail and responsible for getting the gear in and out, a tricky business at best. He had already ordered the sweep detail to put on their life jackets and man their stations. While sweeping, all crew members except those engineers tending the main engines are required to stay on the upper decks to minimize casualties in case the ship hits a mine.

We began "streaming" (lowering into the water) our magnetic gear from the ship's stern. This consisted of two huge cables, a short leg and a long one, held together by canvas "marriage bands." Floats or "pigs" keep it buoyant. The long leg is allowed to pay out to about 1,200 feet; at the end of the short leg is a copper electrode.

When the sweep (known as a jig-sweep because it forms a "J" as it floats astern) is finally streamed, a powerful generator is turned on. This sends out a powerful-pulsed current which passes through the cables and the water and creates a strong magnetic field, capable of detonating any mines in that area—providing, of course, that the mines have been obligingly set to make this possible.

More often than not, magnetic—as well as other influence mines—are preset so that their mechanism is not tripped the first time a ship passes over, or the second, or possibly even the tenth. They can be set in any way the enemy chooses. This complicates the sweeping problem and requires an almost endless (or so it seems to the mine sweep men) number of "counts" over an area before mine commanders dare give the "all clear."

That particular day, our Osprey and the Waxbill swept all day along two different paths, going and coming, and thereby chalked up a total of four "counts" over the channel without setting off any mines. Possibly the mines which were supposed to be there had become inactive. (Fortunately, influence mines do not have a very long life, compared to contact types.) But, as Dusty had pointed out on innumerable occasions, greater than the fear connected with sweeping mines is the worry that maybe you've missed one, especially when a big ship is coming in.

So, this same outfit would have to sweep this same channel again and again and again, going through this same tedious, difficult, nerve-racking routine for an undisclosed number of times before they could safely assume that a threat did not exist.

By the time we steamed back into Inchon late that afternoon, I began to understand why the mine sweep force is often referred to as "the vikings of the modern Navy": wooden ships and iron men. I had had one day of sweeping and I was utterly exhausted; the Osprey's men, not so long ago, had had 48 straight days of it at one stretch without a break.

For weeks, on all sides, I had heard nothing but the highest praise for the men of this branch of the service. Now I could appreciate it. "Everybody in this outfit has got more spirit than I've ever seen before in my life," said Phil Levin, "and every other mine sweep skipper here feels the same way."

"No matter how tough it gets, they never gripe," agreed Lieutenant Commander Wells R. Bill, of Poughkeepsie, New York, operations officer for Mine Squadron Three (whose present commander is Captain R. C. Williams, of Baltimore, Maryland). "Most of them are reserves, thrown into the outfit in a hurry. Some of 'em have never seen a mine sweeper before; but they get indoctrinated in a hurry."

That the Navy is cognizant of both their heroism and the quality of the job they've done is evidenced by the fact that more than 250 awards have gone to mine sweep personnel in Korea so far.

And that we are now, it is to be hoped, finally aware of one of the greatest lessons of the Korean war—the urgent necessity for an improved and expanded mine force—is probably indicated also by the re-establishment a few months ago of an over-all command—Mine Force Pacific Fleet—at Pearl Harbor, with Rear Admiral John M. Higgins, of Madison, Wisconsin, who is one of the Navy's "most seagoing" admirals, as its commander.

Mine War's Future Predicted

Admiral Higgins told Collier's: "It is obvious from the mine warfare we have been engaged in during the Korean action that these deadly weapons can and will be effectively employed by any enemy we may face in the future.

"It is a basic military fact that any small maritime nation, with only elementary transportation facilities, little technical experience and a minimum of improvised equipment, can deny the use of its ports and the shallow waters along its coasts to a large, modern naval force at little cost to itself, simply by the extensive laying of even elementary types of mines."

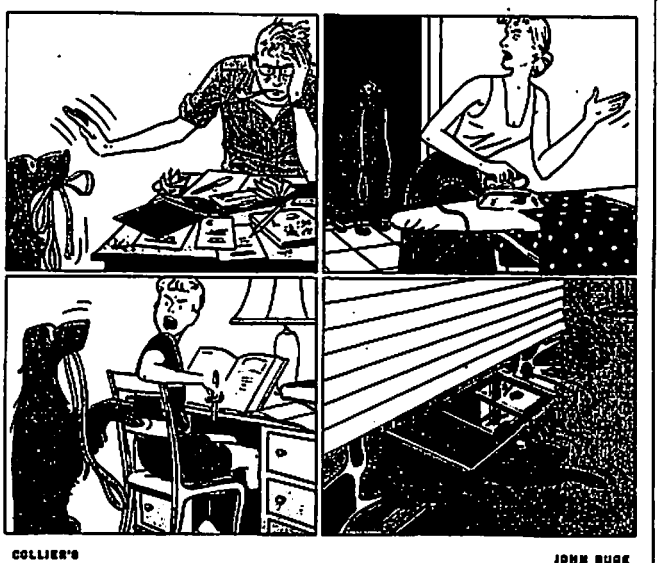
Korea has shown us that more complex mines are sure to be developed, and they will therefore be more difficult to sweep. However, it is well to remember that this only poses a challenge: for there probably never will be developed a permanently unsweepable mine. Mine laying versus mine sweeping, mine versus countermine—it's a race for superiority in research and supply.

Korea provides something of a basic proving ground, too. Already, it is good to report, we've made improvements in our techniques: the Wonsan and Chinnampo sweeping operations provided some thrilling examples of close co-operation among helicopters, PBM patrol planes, underwater demolition frogmen and sweeper craft, as well as very small boats equipped with midget gear—all clicking on one operation.

And we will have plenty of opportunity for developing many other improvements in gear and method: we are still sweeping mines laid in World War II; and come early peace or not, Mine Squadron Three will have to stay at the job of sweeping up Communist mines until they no longer pose a threat to our ships.

There will be no cease fire for the mine sweepers for a long time to come. THE END

CLANCY



COLLIER'S JOHN RUGE