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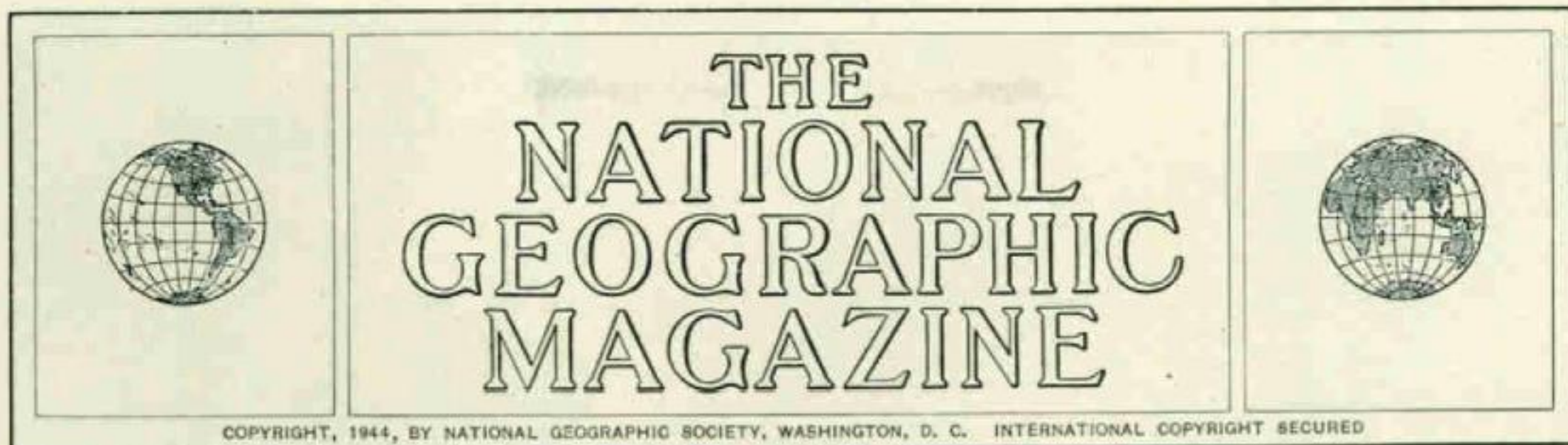
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Landing Craft for Invasion

BY MELVILLE BELL GROSVENOR

YOUR soldier son, was he one of the first to land at Salerno? Or did he leapfrog up the New Guinea coast to take the Japanese by surprise at Hollandia?

Your husband, your brother, your boy friend—even your father—was he one of those gallant Marines who swarmed ashore on Kwajalein or Eniwetok in the Marshalls?

If so, he was put ashore by the men who man the landing craft of the Amphibious Force of the U. S. Navy and Coast Guard.

His huge tanks, artillery, trucks, ammunition and supplies—even his hospital staff and nurses—all were landed by the assorted craft of this important new branch of the Navy.

Like huge whales casting up thousands of Jonahs, LSTs, LCI(L)s, and LCTs and myriad small craft nose ashore and disgorge from jawlike bows the divisions and materiel that are winning battles everywhere.

Xerxes drove his Persian hordes across the Hellespont on galley bridges to attack Greece. William the Conqueror ferried his Normans across the English Channel in boats to invade the British Isles. Even the Japs have used small barges in this war. But no power has yet employed landing ships and craft on the grand scale that we are using them today.

As I write, fleets of these landing vessels jam British harbors and rivers, poised for "D" Day, ready to swarm across to "Fortress Europe," ferrying our invasion forces.

For six weeks I have been the guest of the Alligator Navy, as "Amphibs" call their outfit. Officers and men put me through a rigid course, just as they would any "boot," from knot tying to beaching.

I sat in on training classes; talked with veterans of Europe and the Pacific; bounced around in an LCI(L) in the Atlantic; and rode the ramp of a charging LST.

"It's a strange Navy, this new Amphibious Force," an old-timer told me. "All my life I have been taught to keep my ship off the reefs. Now I must steer full speed through the surf and hit the beach like a charging bull. What's more, I must keep her pinned there solidly, so the Army and its tanks can swarm ashore. Then I back off quickly and scam out of there."

No wonder Amphibs affectionately refer to their branch as the "Ambiguous Navy."

Amphibs Trained at Solomons Island

"Where do you train the thousands of officers and men needed for landing craft? Are they put aboard commissioned ships, or do they go to school first?" I asked.

"Come down to Solomons Island, on the Patuxent, and we'll show you," he replied. "You know, the Marines who took Guadalcanal in the Solomon Islands trained at Solomons Island, Maryland! And the landing crews who put them ashore learned the know-how on the Chesapeake, too."

So on a cold, blustery day I reported "aboard" the Amphibious Training Base at Solomons, Maryland. Comdr. Neill Phillips, USN, the training officer and a veteran of 22 months fighting Japs in the Pacific, was just leaving his office to welcome a new class of officers.

"Come along," he said, "and we'll put you through the works."

Along with 300 young officers, whose gold stripes still glistened, we filed into a big frame hall.

"Gentlemen, you have come here straight from civilian life and are being plunged into the center of a great historic event. Never before has a warring power developed amphibious operations—that is, the landing of an



U. S. Coast Guard, Official

Down the Ramp and through the Surf Goes a Half-drowned Jeep at Cape Gloucester

Marines must work fast, for Jap snipers still are active in the trees of this New Britain beachhead. LSTs (Landing Ship, Tank) bumped hard on an offshore sand bar coming in for this landing, yet Coast Guard and Navy skippers drove their ships in at full speed on schedule. The man on the bow door is taking a short cut from the forecandle to the ramp.

army from boats on an enemy's shore—to the extent the United Nations are doing today.

"Wherever the war takes us, whether it be the coasts of Europe or the Japanese islands, we must have landing craft—tens of thousands of them—to put our troops on the beaches and keep them there.

"This is *our* secret weapon!

"To man these vessels we shall need 140,000 new officers and men in the next six months. Think of that! There were only 90,000 in the whole Navy a few years ago.

"Just as we build landing craft on assembly lines, so we must train you men by mass production.

"But you do have one advantage. Because this amphib game is so new, you stand on an equal footing with us old-timers. We know very little more about it than you do. You have a chance to grow up with this child prodigy of the Navy."

Afterwards, Commander Phillips showed us

through big school buildings which buzzed with Navy talk and men filing to and from classes. I watched officers learning to tie knots and read signals, studying seamanship and navigation. Sailors fresh from farm and city were being taught to wire splice.

"Some day, knowing how to splice wire may save them from an ugly situation," the instructor said. "Towlines and stern anchor cables frequently part at awkward moments."

In one room a group was calling out the nicknames of Jap planes as the instructor flashed pictures on a screen.

"Flash drill in aircraft recognition is vital," the lieutenant said. "Officers and men must recognize planes instantly or they may shoot down friends or let enemies get away. We stress particularly six United States carrier planes.

"We begin by flashing pictures for 1/10 of a second and work up gradually to 1/75. Men impress the image on the mind and call



U. S. Marine Corps, Official

Up "The Slot" Two LSTs Steam, Bound for Rendova, Central Solomons

Soon these Marines are to land their heavy guns and equipment on Rendova and blast the Japanese on Munda Point. The chimneylike ventilators draw carbon-monoxide fumes from the tank deck below when tanks warm up and chug off the ship. Months of preparation went into the plans for this campaign. "The Slot" is the sailors' name for the narrow northwest passage through the Solomon Islands.

out 'Zeke' for Jap Zero, 'Janice' for JU 88, or 'Mike' for Messerschmitt 109E faster than you can say Jack Robinson.

"Also, we instruct the officers and men in dark adjustment. They must wear red goggles or remain in the dark 20 minutes to a half hour before going on night watch, so they'll have cats' eyes. We teach them how to scan, or keep the eyes moving constantly to spot objects in the darkness."

On one big field I saw two lines of sailors throwing ropes as if trying to lasso each other.

"That's our mooring school where we teach the deck forces to heave lines," the officer in charge explained. "The field is laid out like a dummy ship approaching a dummy dock. The wooden posts you see represent bitts on a ship and bollards on a dock to which the ship's lines are made fast."

I watched sailors on the "ship" throw heaving lines across the dusty "water." Men on the "dock" pulled them in, dragging across

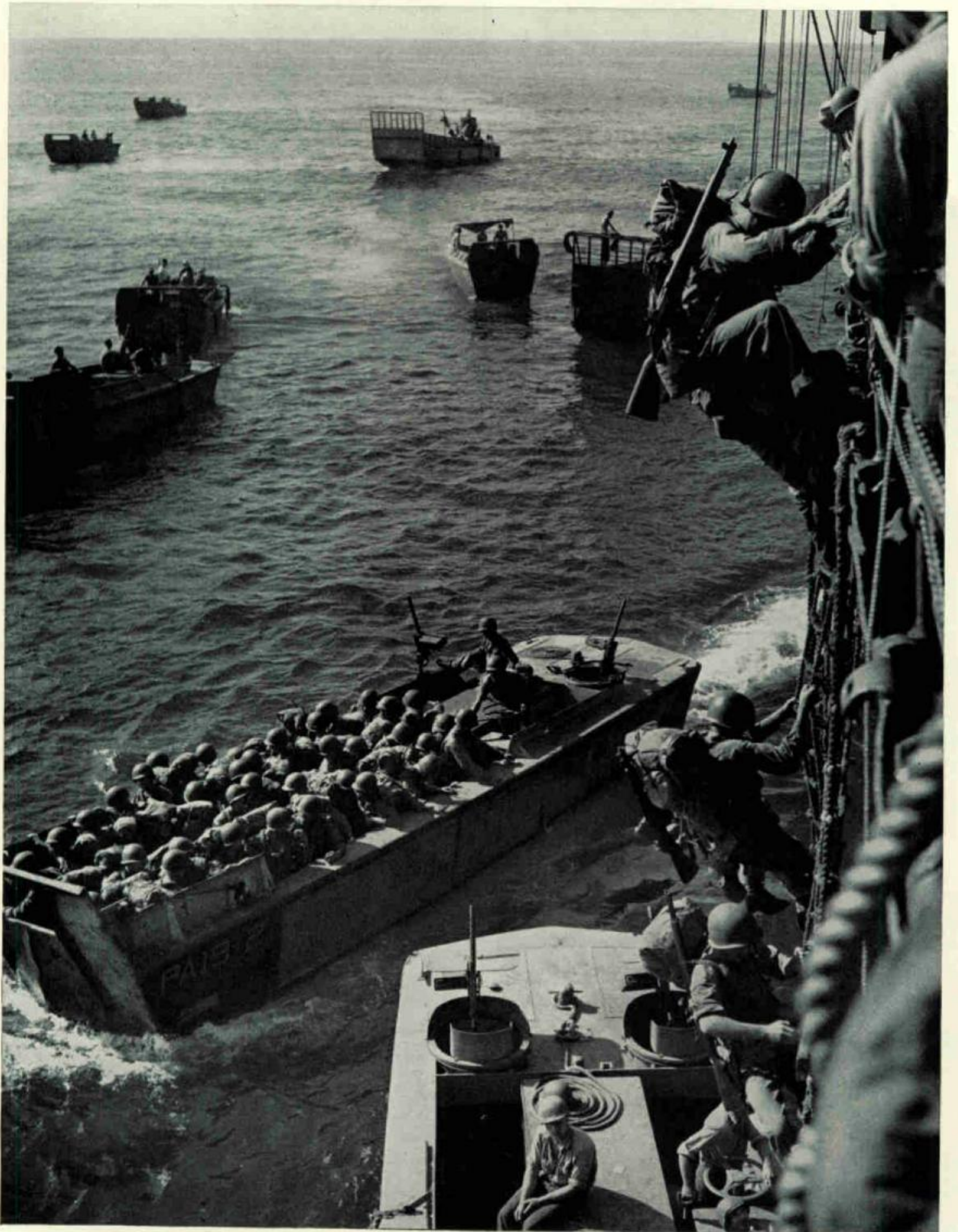
big mooring hawsers which they carefully made fast to the posts.

In machine shops officers and sailors of the engineering department were busy tearing down and assembling every kind of amphibious motor and engine.

"We repair all our training craft here," my guide said. "In that way engineers learn practical lessons which will stand them in good stead later."

"Most of our machinists were automobile or boat mechanics in civil life. That young ensign in coveralls was engineer of a tuna-fishing boat on the west coast. This man took care of Diesels on a streamliner. He is invaluable."

On a bank overlooking the harbor, a black tank belched fire and smoke. Three rain-coated figures held a long hose, its nozzle spraying an umbrella of white mist. Above the roar of burning oil, the officer in charge was shouting, "Keep low! Use the spray as



U. S. Coast Guard, Official

U. S. Troops Go over the Side into Assault Boats for the Bougainville Landing

Manned by a Coast Guard crew and filled with battle-equipped Marines, one LCVP (Landing Craft, Vehicle and Personnel) has just got under way, headed for the rendezvous circle. Following a schedule like a railroad timetable, this boat and others will charge the beach in waves (page 8). The 36-foot craft, designed by Andrew J. Higgins and made of wood, is armored on the sides and has a steel ramp. In the background two larger LCMs (Landing Craft, Mechanized) with grill ramps, stand by for tanks or vehicles.

a shield from the flames. Move in slowly, heads down."

Gradually the white fog smothered the fire as easily as snuffing a candle.

Walking past the docks, we saw lines of green- and gray-clad landing craft, each kind with different lettering.

"Won't you explain the alphabet names for landing craft?"

Alphabet Names Tell Landing Craft Uses

"That's simple," he said. "The letters describe what the vessels are designed to do. For instance, LST stands for Landing Ship, Tank. An LST is a large ocean-going ship which carries tanks and vehicles across the seas and lands them ready for action" (p. 2).

Veterans have many pet names for LSTs, depending upon the frame of mind. On the way over, Large Slow Target and Long Slow Trip are popular, but after "dishing it out" proud crewmen call them Last Stop Tokyo.

"There is also the new LSD, a Landing Ship, Dock, which can transport and repair landing craft in its 'stomach,'" my guide continued. "It is a big ship, 457 feet long (p. 17).

"Still in the hush-hush stage is the new LSM (Landing Ship, Medium) combining features of the LST, LCI(L), and LCT(6). It's much faster than the older designs and will carry tanks and vehicles."

"But what about the LCs? Most landing craft names begin with those letters," I asked.

"That's easy! 'L' of course stands for Landing and 'C' for Craft. When we speak of a craft or boat in the Navy, we refer to a vessel small enough to be carried by a ship.

"'I' stands for Infantry and '(L)' for Large. LCI(L)s are built as troop carriers, but in recent landings some have served as gunboats, clearing beaches for the infantry. They can ferry 200 foot soldiers long distances, feed them, and put them ashore (page 7).

"'T' refers to tanks. So LCTs are motorized barges capable of landing a number of tanks and several small vehicles. We have two LCT types, Mark V (page 30), and Mark VI (page 29).

"LCMs are small landing craft for ferrying mechanized equipment. They can carry one large tank and are fast. Big troop transports use them to ferry troops and cargo ashore (opposite).

"Those small boats over there with the ramps—the LCVPs and LCP(R)s—are vehicle and personnel carriers. They are used as ships' boats on LSTs and for landing troops too (opposite and page 8).

"There are several other small craft. LCRs are rubber landing rafts (page 9). LCCs, or

control craft, guide assault boats to the desired beaches. LCS(S)s are small support boats firing rockets and machine guns (page 6). The Amphibious Force also has several seagoing vehicles. Among them are the LVT, Landing Vehicle, Tracked, developed by the Marines (page 11), and the 'Duck,' a big truck of the Army's which navigates on land or water (page 26).

"After all, the best way to learn the uses of these vessels is to cruise on them. Report aboard LCT 509 at 7 a.m. tomorrow."

Sitting next to me that night in the officers' mess was a young LCT group commander who had three Bronze Stars on his African theater ribbon. Lt. (j. g.) Hugh D. Allen was a veteran of the Tunisia, Sicily, and Salerno campaigns. He was one of the first to take an LCT(5) to the Mediterranean region. Now he is back at Solomons, teaching new officers how to handle LCTs.

"How did you get your craft overseas?" I asked.

"After my training at Solomons in the fall of 1942, I reported aboard a Liberty ship with my crew in New York," he said. "We found our brand-new LCT broken up into three sections and lashed down on deck.

"When we got to Casablanca, these chunks were lowered over the side and my crew and I bolted them together in 24 hours. Mind you, we had never tackled such a job except in textbooks, but we managed to get the 960 bolts in their proper places and nuts turned down snugly. To our surprise our little craft chugged off as nicely as you please and held together perfectly."

Turning to another lieutenant, Allen said, "Coen, tell us about how you stocked your LCT at Casablanca."

"Sure," Lt. (j. g.) R. P. Coen replied. "After we had put our boat together, we fueled and then went out to a wrecked ship at the harbor entrance. As we came alongside, big swells bobbed us up and down and forward and back. We were scared, for we had made only three practice landings at Solomons.

"While salvage men dumped jeeps, guns, trucks, and everything else on our deck, a couple of our men went aboard to pick up anything useful. We completely stocked our craft with silverware, crockery, and fancy rations from this sunken transport. LCTs were not as fully equipped then as they are now, and this salvaged food came in handy."

LCTs Won Spurs in North Africa

"For an ensign, duty as an LCT skipper is the best in the Navy," Lieutenant Allen interjected. "He has all the responsibilities and



U. S. Coast Guard, Official

This Is What the Enemy Sees When the First Wave Hits the Beach

From the bow of an LCS(S) (Landing Craft, Support, Small), the combat photographer looks back at assault boats, or LCVPs, speeding shoreward, loaded with troops. Accompanied by shelling, strafing, and bombing with live ammunition, these maneuvers on the eastern United States coast simulate invasion. In battle, the men crouch down behind the armored visor and fire rockets from the covered projector at right. Cruisers in the distance cover the landing with shellfire.

privileges of a commanding officer. His only trouble is in obtaining extras for his crew. An ensign hasn't enough gold braid!

"After a few days Coen and I headed north for Gibraltar and then, bucking terrific head seas, we steamed down the Mediterranean to Oran," Allen continued. "I shall never forget how my LCT acted in those big seas. Her bow would rise on a wave and then slam down with a mighty wham on the next one. From the bridge I could see the deck undulate like a caterpillar. Our crew had never been to sea before, yet they handled the ship like old salts.

"About this time Ensign Jesse Anderson, an LCT friend, drew the first enemy blood for our craft and won our first Silver Star. While coasting along North Africa, a big German JU 88 swooped over and dropped a bomb while the crew was at breakfast. Fortunately it missed by 200 feet.

"By the time the plane had come around for a second run, the cook and a gunner had manned the 20 mms. and opened fire. At first the bullets went wide, but then they got on and plastered the plane. It caught fire and crashed in the mountains. Later the Army brought down a section for the LCT boys.

"During the Tunisian campaign our LCTs ferried tanks and supplies along the African coast for the Army, and so we played a part in the final victory at Cape Bon.

"My LCT landed at Licata, Sicily, early in the morning of July 10. Our job was to ferry tanks, troops, and supplies ashore from big transports. On the trips back we carried Italian and German prisoners. Once we had 225 of them on deck. They were docile and glad to be out of the fight.

"For a few cigarettes they would hand over their helmets, rifles, and other trinkets to our men. The civilian crewmen of some of the big ships, wanting trophies to take home, would buy them at fabulous prices. Many sailors made handsome profits in this quick turnover of enemy souvenirs.

"After a day or so we ran short of supplies, but we soon fixed that! Transports were anxious to unload and head for home. We soon got on to this and worked it to our benefit. Coming out from shore, I would sidle up to a fat transport and wait for a hail.

"'LCT No. 15, can you unload us?'

"'What have you got to eat?' I would yell back.



U. S. Navy, Official

LCI(L) 335 Passes the Ammunition by Bucket Brigade at Rendova

This doughty little craft, commanded by Lt. John R. Powers, ran "The Slot" more than 20 times, carrying troops and Seabees in the New Georgia and Bougainville drives (page 22). Clearly shown are the two ramps and the hornlike catheads which hoist the gangways in and out. Unloaded, the LCI(L)s (Landing Craft, Infantry, Large) wind in their stern anchors and back out, like the one in right background. Capture of Rendova played a big part in the taking of the air strip on Munda Point, close by.



U. S. Coast Guard, Official

Beneath Bagana Volcano Assault Boats Circle in Empress Augusta Bay Awaiting Their Turn to Storm the Beaches

During the charge, helmeted Marines in green- and brown-splotched suits crouched down behind the armored sides of the LCVs. As the boats landed, ramps dropped and Marines poured out, quickly getting under cover. Then they "snake-bellied," or crawled on hands and knees, through the jungle to capture the Bougainville air strip. Jap snipers were hiding in the trees and strafing planes tried to break through our air cover (page 24).



U. S. Coast Guard, Official

Salvage Crews Come to the Rescue of an LCVP Broached on the Wave-lashed, Black-sand Beach of Bougainville

Broaching, or swinging broadside to the breakers, is the terror of all Amphibious men. Washed up farther and farther by the waves, stranded craft are "duck soup" for the enemy. Besides, the beach is blocked and time schedules are disrupted (page 20).



U. S. Marine Corps, Official

Across Tarawa's Treacherous Shelf, Tired Marines Tow Wounded Heroes on an LCR (Rubber Landing Craft)



U. S. Navy, Official

A Ship-to-shore Operation Is Clearly Shown in This Dramatic Air View of the Invasion of Eniwetok

First, the battleships at top shelled and planes from carriers bombed and strafed the atoll. Then LCSs charged in, blasting the beaches with rockets. Behind them came the first waves of LVTs (Landing Vehicles, Tracked), which crawled up the beaches carrying Marines and infantry (right center). Next, successive waves of assault craft poured in. When the beachhead was secure, fat LSTs waddled in, landing tanks and cargo. Boats in center have started back to the transports for another load.



U. S. Navy, Official

In This Perfectly Executed Amphibious Operation, Marines Captured Emirau in Less Than Four Hours on March 19, 1944

LSTs at sea spawned these "Alligators" (LVT1, left) and "Water Buffaloes" (LVT2, center), like guppies giving birth to young. After they had swum ashore and delivered their cargo, the amphibious tractors, or "Amtracs," returned and crawled up the tonguelike ramps into their mother ships' "stomachs." In the distance, a shore party bucket brigade passes boxes from stranded craft. At left a truck and trailer roll ashore from the bow ramp of an LCT. Emirau, a nine-mile-long arrowhead island in the Saint Matthias Group, provides the Allies with a valuable air and sea base less than 700 miles south of Truk.



U. S. Coast Guard, Official

It's Written on Their Faces! They Took Eniwetok in Six Hours

Tired and grimy, Coast Guard men and Marines come back to their transport in an LCVP after wiping out the Jap defenders of Engebi Island. Here they show off their Jap flag and shout, "The Rising Sun has set on Eniwetok!" When the sea is rough men must be nimble in climbing out of bobbing boats.

"'We could spare a couple sacks of potatoes,' he'd reply. Of course, I'd cuss under my breath and move on to the next ship. Her captain would tempt us with some frozen beef or new phonograph records, and then we would go right alongside and begin loading. Sometimes the skipper would invite me aboard for a shower and a good feed. Our crews were well taken care of, too.

"Approaching Salerno, we passed in the distance the Isle of Capri. We didn't realize that big German Tiger tanks were lined up on a camouflaged road, waiting for us to get in close. All hell broke loose when they opened fire. An 88-mm. shell struck the turret of a Sherman tank on the deck right below me and blew it to pieces.

"Our flag was split by shrapnel. The quartermaster replaced it with an old one and then sat down and calmly sewed it up.

"I certainly was proud of my men during those hectic eight days when our LCT was

bombed, strafed, and shelled daily. Shuttling between transport and beach, we often spotted a familiar LCT number and gave our friends a passing hail. Surprising how few casualties our landing craft had.

"After our troops had enlarged their foothold at Agropoli, south of Salerno, we went visiting ashore, while the Army unloaded our LCT. One Italian farm family I remember was particularly hospitable. They fed us a wonderful chicken dinner and served local wine. They assured us that they did not make the wine by trampling the grapes with their feet! We ate so much we got dopey. The old man and woman made us take a nap on the family's big bed."

A Day with the LCTs and Rocket Boats

Next morning I was at the dock early. Dozens of LCTs were bustling with life. Engines were coughing. Gray smoke hovered over the tightly packed craft.

I felt a deeper respect for these homely craft after the tales I'd heard the night before of their prowess in battle. To think that in a few weeks these same crews would be steering their own LCTs onto enemy beaches through bomb and shell.

The latest LCT is a rectangular, flat-bottomed barge, 105 feet long and 32-foot beam. It has "tunnels" for three propellers in the stern and deckhouses for the crew, one on each side (page 29). Forward a big ramp, upended, serves as a blunt bow. Lowered, it becomes a loading platform for vehicles and cargo.

The natural way to board an LCT, of course, is by the ramp, but when she is tied up at a dock one must climb awkwardly over the side. She boasts no fancy gangways or ladders; she is purely a utility craft.

"Welcome aboard," the skipper greeted as I jumped down to the tank deck. "I am glad you picked today. The rockettes are going to perform."

"Rockettes? What are they? LCT mascots?"

"Lord, no! They are the men who man the rocket, or support, boats. These Buck Rogerses in Navy uniforms prefer to be called rocketeers."

The skipper backed our LCT out and headed down the congested channel. Other LCTs and LCIs were getting under way too, but our captain skillfully threaded his way through the congestion.

"You handle your LCT like an expert. How long have you had command?" I asked.

"Just one week today, sir. I graduated from Midshipmen's School at Northwestern U. last month."

"But you must have had small-boat experience in civilian life?"

"No, sir. Before the war I taught high school in Missouri. I had never seen a boat before I joined the Navy. In two weeks I proceed to New Orleans with this crew to pick up a new LCT and then go overseas."

It was unbelievable, but typical of every other Amphibious craft I rode. Skippering these boats seems no more difficult to an alert American youngster than driving a car back home or riding a motorcycle.

Forming column on other LCTs, we snaked down the tricky channel to the Chesapeake, passing Solomons. In peacetime this village is famous as a fishing town and yachtsman's rendezvous. Now the liberty invasions of hundreds of blue-clad men from the Amphibious Training Base and their families all but swallow the little town.

It was a cold, snappy day and our rocketeers roughoused to keep warm. They were a

jolly, tough bunch. Among them were a few veterans of Sicily and Italy. Knots of youngsters surrounded these men, listening to yarns about rocket boats in action.

As we neared the target beach, 12 small LCS(S)s passed us. They looked like ordinary gray speedboats with armored wheelhouses and steel windshields (page 6). Each had a projector, or framework, on either side for nesting rockets.

The leader came alongside and Lt. Homer Tolivaisa, the rocket instructor, shouted, "Jump in but watch the ice on deck. The spray is freezing." Wearing life jackets, we clambered aboard the slippery, bobbing craft.

As we chugged off, the loaders carefully lifted bomblike rockets over the armored shields at the sides and placed them in the racks. They seemed as pleased as if they were setting up skyrocketes for the Fourth of July. Only these rockets carried lethal fragmentation shells instead of American flags or toy paratroopers.

Playing "follow-the-leader," three LCS(S)s sped along behind us. On signal, we wheeled together and headed for the target. The lieutenant cautioned everyone to crouch down beneath the wheelhouse.

"Fire One!" he called. Instantly the rocketeer closed the switch and the rocket went off with a loud "whoosh!" There was no other noise, but a cloud of acrid smoke engulfed the boat.

Looking up, we could see the rocket wobbling and hurtling to the beach.

"Floats with the greatest of ease!" a loader commented. It struck with a dull "crump" about 100 yards short of the beach.

"That was a ranging shot," the lieutenant explained. A few seconds later he gave the order, "Fire Two—Fire Three!" Again our rockets went off with a whoosh. Sister craft fired at the same time and the shells smothered the beach around the target.

Rockets Used at Fort McHenry in 1814

"Are these the rocket boats we read about in the news from Europe and the Pacific?" I asked.

"Yes, these same boats helped clear the way for our troops at Sicily. They went in with the first waves of landing craft and cleared the beaches of machine-gun nests and strong points. It is a cheap and easy method of getting concentrated fire power. Each boat can fire in a few seconds a salvo of 24 rockets. Newer and larger support boats fire many more. Probably these men will spearhead the big invasions of Europe or the Pacific."

Rockets are nothing new. Remember the



U. S. Navy, Official

From Wide-swing Jaws of an LST Pour German Prisoners from Italy

LSTs carry many strange cargoes. On the trip to the battle front they transport everything from donkeys and tanks to artillery, soldiers, and supplies. Returning, they bring out prisoners and wounded. Here a bareheaded Nazi officer leads off a group of prisoners. American soldiers with Tommy guns at the ready watch every move (page 24).

line, "And the rocket's red glare," in "The Star-Spangled Banner"? The British used Congreve war rockets in the attack on Fort McHenry in 1814. Francis Scott Key referred to their red trail when he wrote the National Anthem.

Back on the LCT the crew took me down to their messroom and plied me with coffee with plenty of milk and sugar. The tiny galley had an oil-fire range and family-type icebox. The two officers and 12-man crew ate at the single table, but at different servings. Informality suggested life on a yacht with a Navy tang.

"Cookie can't read a word," a boatswain's mate said. "He is a swell cook, but he runs to peas and tomatoes because he recognizes the pictures on the cans!"

Up from a hatch in the deck popped a grinning machinist's mate, like a jack-in-the-box. "Come down and see our glory hole," he invited.

Following him down the rathole, I found myself stooping in a low compartment not five feet high, painted snow-white. A whining, roaring Diesel hogged most of the space. Its high-pitched noise was earsplitting. I could not hear a word my gesticulating guide said as he conducted me through the nooks and crannies of the engine room and tried to tell me what the many varicolored ballast valves, pumps, and auxiliary engines were for.

Opening watertight doors, he took me through the other engine rooms, miniatures of the first. The temperature was high. Working conditions for the engineers must be trying, especially in the Tropics. Yet my machinist-mate guide said he wouldn't change places with the signalman up in the icy cold of the bridge for anything.

Climbing up the ladder from the starboard engine room, I found myself in the ship's head, or washroom. The captain and crew all use



U. S. Navy, Official

A Flotilla of 14 Big LSTs Loads a Mechanized Division at Bizerte

Bound for Sicily, gasoline trucks, jeeps, tanks, and every conceivable weapon pour up the ramps and through the open bows of the big ships. Elevators take the lighter vehicles to the main deck. Skippers always put the Army's mobile anti-aircraft topside so that the guns will give added protection. Most vehicles back on so they will run off headfirst. Least important go aboard early so they will be the last off. One skipper of the four LCT(5)s (right) has rigged an awning for shade.

this small room with its washbasins, hand-pumped toilets, shower, and laundry tub.

Going forward through a watertight door, I entered a living compartment for the crew and captain. Only a curtain separated the quarters. Double-deck bunks served for the sailors and for the captain and his executive officer. The captain's only conveniences were a table desk, a small ship's safe, and a campstool for a chair.

LCT Lands Army Tanks in Surf

It was bitterly cold and blowing hard the day the LCTs took me out to see beaching and landing Army tanks in the surf. Our little craft jumped around and yawed from side to side as she drove into the wind. When waves struck her blunt bow, the ramp clanked and rattled, spray flew, and she shimmied from bow to stern.

We paralleled the beach in single file. On signal from the flagship, we turned and headed for the big rollers crashing on the sands.

About 100 yards off, the skipper ordered the stern anchor let go, and the cable whined as it ran out behind us. Just before we hit, he stopped the engines and the ship coasted in, ramming the beach with a jar which nearly threw me off the bridge. A following sea smacked our flat stern and spouted green water and foam over the bridge, wetting us thoroughly.

Instantly the skipper sang into the voice tube, "All engines ahead two-thirds, rudders amidship. Keep a strain on the stern anchor."

Above the roar, he shouted to me, "Engines hold her against the beach, anchor keeps her stern to the seas."

"Lower the ramp," the skipper called next, and our bow dropped to the beach. Quick



U. S. Coast Guard, Official

In the Hot Midday Sun of Cape Sudest, New Guinea, Marines Swarm Aboard LSTs for the Invasion of New Britain

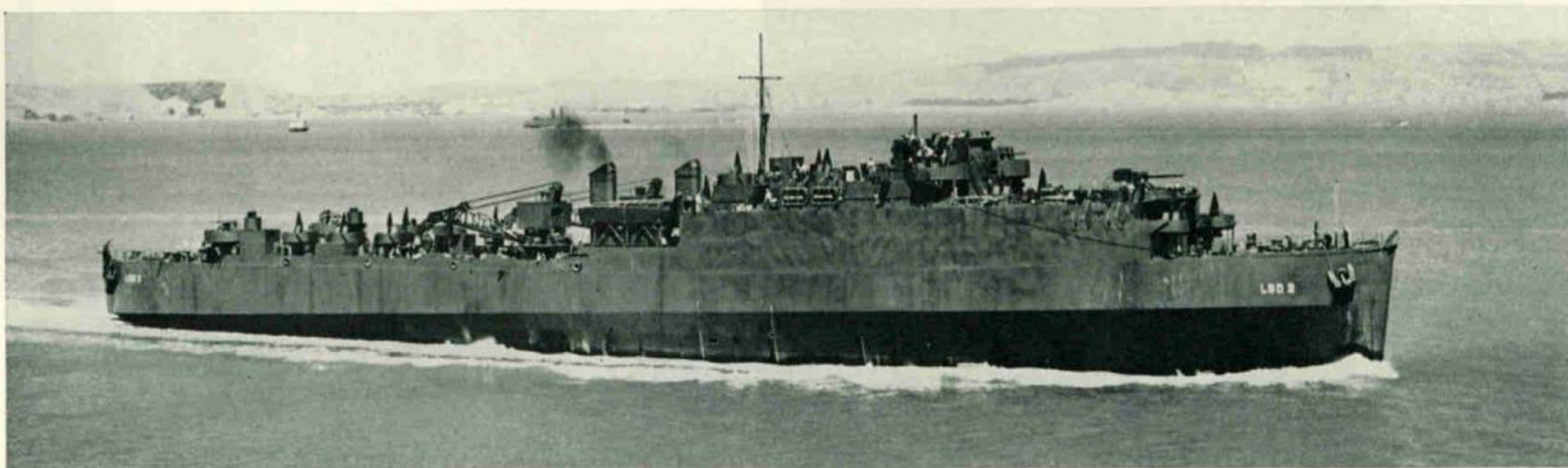
Two days later these same men in jungle "zoot suits" landed through the surf of Cape Gloucester (page 23). It took only 40 minutes for 800 men to pile up the ramp of each fully loaded LST. Antiaircraft gunners, standing by now, will soon be shooting down Jap bombers. Men sit on a broken-down Duck in center.



Melville Bell Grosvenor

Though LCI(L)s May Roll and Pitch in Atlantic Swells, They Are Excellent Sea Boats

The sea is moderate here, yet they kick up a fuss as they plow through the water and smack their flat bottoms on the waves. From a distance the LCI(L) looks like a surfaced submarine (page 21). At night, the brilliant phosphorescent glow of spray and wakes clearly outlined the craft.



U. S. Navy. Official

Newest Addition to the Amphibious Fleet, LSD (Landing Ship, Dock) Hides Many Surprises for Our Enemies Across the Seas



U. S. Navy, Official

Each Towing a Barrage Balloon and Zigzagging, Heavily Loaded LSTs Head for the Green Islands, North of Bougainville

In this landing on February 15, 1944, American and New Zealand forces drew tighter the steel noose which is choking off thousands of Japanese marooned on Bougainville, Buka, and other islands to the south. General Douglas MacArthur said occupation of the Green Islands "completes the campaign for the Solomon Islands." Skippers claim balloons are a wonderful help to LSTs, because Jap planes cannot fly low over the convoy but must nibble at the flanks where AA guns can pick them off.



U. S. Marine Corps, Official

On This LST's Return from a Landing, Its Empty Tank Deck Became a Hospital for Wounded Marines

Big ventilators make the cargo space cool and airy. A "Green Dragon" has a sick bay in the far recesses of the tank deck; her officers' wardroom serves as operating room. Here, normally, the crew play games and dry clothes (page 24). Chains along the sides lash tanks securely to lugs in the deck.



U. S. Coast Guard, Official

Bow Pressed Against Black Sands, an LST Disgorges Men, Tanks, Trucks, into the Jungle

At dawn December 26, 1943, naval and airplane bombardment cleared the Cape Gloucester beachhead, knocking down trees and smashing pillboxes. Support boats (LCSs) firing rockets blasted remaining strong points and led the assault craft carrying Marines. Successive waves of LCI(L)s and LSTs brought in more "leathernecks," infantry, and heavy equipment. Elevator in center, fully loaded, is about to descend. Overhead, American fighters brought down Jap bombers, which fell around the beached ships.

as a flash the big Sherman tanks on the deck below came to life and chugged off, dipping and clattering down the ramp. Up the beach they tore, plowing furrows in the sand.

Suddenly the skipper pointed to the LCT next to us. A big wave had caught her and spun her around broadside to the waves. "She is broached. Now we are in for trouble," he said. "Her stern anchor failed to hold when she tried to pull off. She is helpless and we'll have to tow her off" (page 9).

Quickly our captain backed his ship out, the anchor winch winding in furiously. Big seas splashed over the stern.

We moved over directly behind the broached LCT, dropped our anchor again, and drifted slowly in. With much difficulty a hawser

was passed from our craft and secured. Then, our engines at full astern, we gradually pulled the stranded craft off.

Broaching is one of the nightmares of all landing craft, large and small. Big waves hit them broadside, washing them higher and higher up the beach. Stranding on enemy beaches throws a monkey wrench into landing operations. Successive waves of assault boats are slowed and time schedules upset.

LCI(L) Resembles Surfaced Submarine

For a week I cruised with the LCI(L)s, those doughty little craft that land our infantry on enemy beaches. We shoved off from Solomons at dawn, our seven LCIs (short for LCI(L)s) steaming in column. Quickly each

picked up a creamy bow wave as she plowed coffee-colored Chesapeake Bay.

"Whenever you see a little ship with a big bow wave and white wake streaming astern, you know it's an LCI," Lt. Comdr. Archibald M. Holmes, USNR, our group commander, said. "From a distance she may look like a submarine with conning tower amidships, high forecastle, and cutaway stern (page 17). On dark nights we must be snappy with our recognition signals. Convoy escorts might mistake us for a U-boat."

Close inspection, however, quickly dispels the sub illusion. In niches on either side of the bow the LCI carries a long flat ramp, or gangway, which can be shoved out forward and dropped when beaching.

Standing down the Bay, our task unit maneuvered like big battleships in formation. The commander would send snapping flags to the yardarm and our LCIs would turn ships right, form fancy echelons, or reverse course.

Sometimes they practiced picking up mail or transferring men. One LCI ran alongside another. As the two vessels kissed, a sack of mail was passed or a sailor stepped over the side.

"How do you like the way our captains and crews handle the LCIs?" the commander asked. "Each is manned by two training crews, regular complements standing by as instructors. Not a trainee, except officers, has been here longer than six weeks. When the cruise is over, they pick up LCIs of their own at the shipyards."

As a matter of fact, not a man on the flagship, including the group commander, was in the Navy two years ago. Most of them had been in less than four months.

The new officers took frequent bearings on lighthouses and buoys, tracking our course. Sometimes their "fixes" would put us on Maryland's Eastern Shore! But they would try again and soon have us on our course.

"Where are the sailors on that LCI?" I inquired as a jungle-green LCI passed us on a turn. "I see only officers on deck."

"She is manned by officers. There are no enlisted men on board except the ship's regular crew. You see that officer on the bow, cold spray flying over him? He's the lookout. Others are at the wheel and signal hoists. After this cruise, they will be assigned new crews and then train with their men as units."

"Sound 'general quarters,'" our training captain called as the signal flags came down on the run. Instantly sailors dashed forward and aft to man the guns. "Surface target practice with the 20-mms.," he explained.

Filing past a floating target, each ship in

turn opened fire. Tracers from our midship gun plastered the target in short, quick bursts. Our trainee captain, excited as a kid, shouted, "That's my squirrel shooter from Georgia. Boy, can he shoot!"

"He's a sharpshooter," replied the commander, "but what about number 5? He hasn't hit the target yet. His tracers are all over the place."

"That's my cook. He can't shoot, but he certainly can make mince pie, and that's *his* job."

With the commander as my guide, I wandered all through our little troopship. It's remarkable how much living space has been squeezed into that 157-foot, flat-bottomed hull. She has a deckhouse amidships, with a big recreation room for the crew. Here the men eat, play games, and write letters. Life jackets, helmets, and gas masks line the walls and are stuffed between the overhead beams. On one side are three small cabins for the ship's officers and the Army officers when they are aboard. The tiny wardroom, model galley, and washrooms complete the deckhouse.

Down below, an LCI(L) is divided into four big troop spaces, jammed with triple-deck bunks for 200 soldiers. On this cruise trainees occupied these quarters, officers and men sleeping side by side.

Eight six-cylinder Diesels, arranged in banks of quads, drive her two propellers.

"Our engines pull like teams of four horses," the engineer said. "If one breaks down, we can cut it out and run the others faster. Even one engine will drive the ship. While they whine in a high-pitched scream down here, you can't hear an LCI when she moves slowly.

"Many an LCI has sneaked in to a hostile beach in the darkness, unseen and unheard, until her troops jumped the enemy on shore. LCIs are ideal for leapfrogging up coasts and atoll jumping. They should be called 'ghost ships.'"

On her stern, low to the water, a big barrel-like smoke generator belches white clouds when a screen is needed. Here, too, is the powerful anchor winch, which pulls the craft off the beach in retracting.

The Charge of the LCIs

Next morning I stood high in the conning tower to watch surf beaching. Our LCI rolled and yawed in the Atlantic swells. Dead ahead huge white breakers roared up Virginia Beach. To the right and left other LCIs were charging headlong for the shore.

Are the captains mad, I thought to myself. Don't they realize that this beach is a graveyard of the Atlantic? Countless ships have

been wrecked here, caught helpless on just such a lee shore. Those waves piling up on the yellow sands have rolled unmolested 3,400 miles from Spain.

Yet relentlessly on and on they rushed, bound for that maelstrom of foam.

One hundred yards out the captain let go the stern anchor and our cable snaked out astern. With a sudden shock our craft struck the beach, her bow lifting and riding up on the sand. Surf piled up under her stern and roared past her sides. Out rattled the ramps, and a sailor or two ran down to the beach and back.

"I have beached some 200 times, but I still wince every time I land in surf," the captain commented. "All my instincts tell me to turn around. Yet I must keep on, as there is no changing my mind once I start in. It's vital, too, to get that anchor out at the right instant. If I let go too soon, I run out of cable and hang from the anchor in the breakers. With too little scope, I can't use the hook to pull off when retracting."

I glanced at the other beaching LCIs. Sailors were grabbing life lines and waving their white hats at the girls on the beach. Women and children scurried out of the way as the gray steeds came galloping in.

Surprisingly, our vessel rested quietly, her stern pointing out to sea. Big waves lifted her up and down in a rocking, hobbyhorse motion.

"When the Army is with us, here's where they go ashore," the group commander said. "Carrying all their gear—helmets, rifles, packs, and gas masks—they pile from the troop spaces and run down the ramps and up the beach.

"Oftentimes we can't get in all the way. Then the soldiers must jump off the ramps in water up to their hips. If they fall, they jump up quickly and keep going, soaked from head to foot. All ashore, we retract and go back for another load."

Sailors in the bows hauled in the two ramps. The anchor engine on our fantail whined. Gradually we pulled off the beach. Well clear, our propellers took hold and we headed out, the waves rolling us down as we made the turn.

Off to Sea in a Little LCI

Again and again the ships beached, giving our two training crews thorough practice. Chief fault was a tendency to approach slowly and cautiously. Then the captain would shout, "Give her full ahead, man! Keep her moving. If you don't, the waves will take charge and you'll broach."

Beaching finished, our LCIs headed out to sea in column behind the flagship. Plowing along, the blunt bows seemed to push the whole blue ocean before them, kicking up the usual foam.

Everywhere we looked we could spot tiny Coast Guard patrol craft poking around looking for U-boats. Now and then a big silvery blimp would glide down and look us over.

Well out to sea, a Navy torpedoplane flew over, towing a big red sleeve. Our guns spit tracers and bullets into the blue sky. Most of our shots were below and behind, a common fault of beginners firing at airplane targets.

Around the table after supper in the cozy wardroom the officer instructors spun yarns about their experiences with LCIs overseas.

Lt. John R. Powers, USNR, formerly a social worker in Cincinnati, told of the adventures of LCI(L) 335, typical of all such craft in the South Pacific.

After training at Solomons, Maryland, he commissioned his craft in November, 1942, and set sail for the Pacific, one of the first LCIs to go out. After traversing the Panama Canal, he steamed in convoy nonstop across to the Society Islands, thence by way of several South Pacific bases to New Caledonia.

335's first brush with the Japanese was in the New Georgia push. At dawn she steamed into a small cove on Vangunu Island to land jungle fighters through terrific surf. Her bow stuck into the green forest. Big rollers lifted the ramps and made it difficult for the soldiers hurrying ashore. Backing out, the skipper could hear the infantry shooting in the woods.

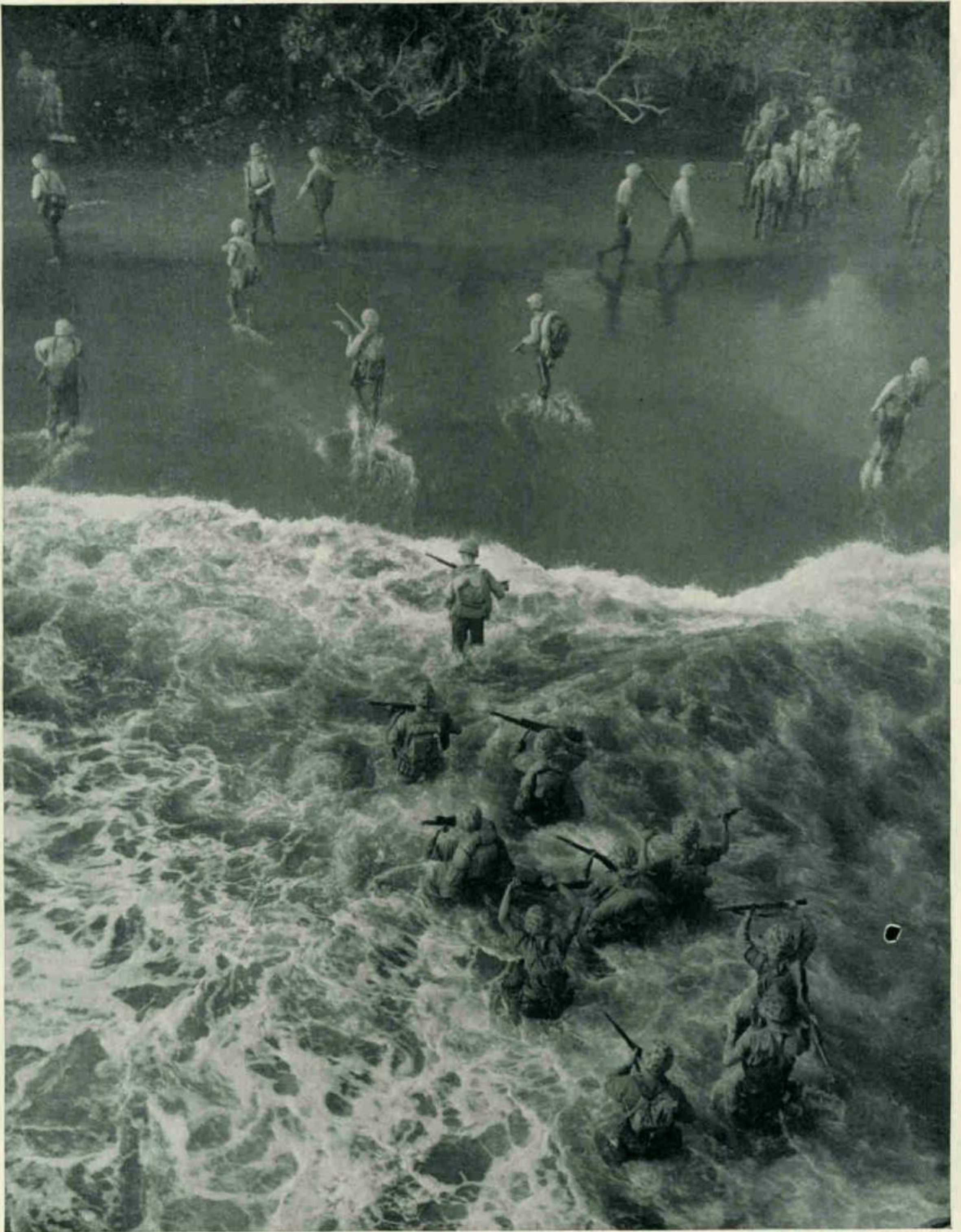
"Did you draw any fire from the shore?" I asked him.

"No. But the surf was so vicious—10-foot waves—that I would hardly have noticed it, anyway.

"We went back to our base in the Russells, loaded again, and on the Fourth of July landed infantry and Seabees at Rendova," he continued (page 7).

"I shall never forget the fireworks that day. Sixteen Mitsubishi bombers came over and dropped their bombs just after we had retracted. In fact, the bomb pattern fell on the exact spot where we had been beached a few moments before. It was a good old Fourth-of-July celebration. Planes fell all around us. Our fighters got most of them.

"We played around close to shore, keeping as inconspicuous as possible until the sky cleared. LCIs are so small and inoffensive-looking that the enemy rarely bothers them. All the time I was more worried about the reefs than the falling bombs and AA fragments.



U. S. Marine Corps, Official

Holding Their Guns High, Marines Dash Ashore through the New Britain Surf

Breakers rolled right over the green-clad veterans of Guadalcanal as they jumped off the ramps of the LSTs. At times only their guns and hands could be seen above the surface. Yet onward they charged into the jungle to take the Japanese by surprise and capture an important air strip on Cape Gloucester. American losses were light. This landing helped seal Dampier Strait between New Britain and New Guinea. Such sandy beaches are ideal for landing vessels. But rocks, coral heads, and artificial hazards are dangerous, rip out bottoms.

"LCI 335 served as a ferry for troops and Seabees to Munda and took New Zealanders to the Treasury Islands. Altogether, she ran 'The Slot' through the length of the Solomons some 20 times, carrying thousands of troops (page 3). She took reinforcements to Empress Augusta Bay, Bougainville. There we fought the surf again. Hanging around offshore, we watched the battle and Bagana Volcano belching smoke and cinders—Nature's accompaniment to the drama going on in the jungle below (page 8).

"Standing up The Slot in November, we passed two little 'yippy' boats chugging along, loaded with Thanksgiving turkeys for our forces at Bougainville. The little YPs (converted yachts) were all alone, so they joined our convoy."

"Did many of your crew get malaria?" I asked Lieutenant Powers.

"We were exceedingly lucky; only three came down with it in our LCI flotilla," he replied. "Mosquitoes were well controlled at our base on Florida Island. Besides, LCIs usually anchor several hundred yards offshore, and malarial mosquitoes don't fly far. We sprayed our ship regularly. The only time we were really bothered by mosquitoes was when we landed soldiers at dusk or dawn." *

"What sort of food did you have?"

"We ran out of fresh supplies during the month we were at Rendova. We got along on the ship's dry stores, mostly luncheon meat. Once we went ashore and shot two wild bulls. The meat was fresh but very tough."

"Did you carry many wounded?"

"No, LCIs are not equipped for carrying stretcher cases. But we did bring out many walking wounded and fatigue cases."

Next morning when I hit the deck the ship was rolling and tossing like mad. Snug in my bunk, I had felt no motion. After breakfast I reeled down the corridor and climbed the ladders to the conning tower. The wind was not blowing too hard nor were the seas excessive, yet our LCI bounced around like a Toonerville trolley. Her bow would run up on a wave and come down with a smack on the next one. She shook like a dog (page 17).

LST—a Floating Tunnel

Back at our anchorage, the commander signaled an order to "nest up." We dropped our stern anchor—LCIs often moor by the stern—and the other craft ranged up alongside. A slight swell was running and the little ships rolled and bumped in comradely fashion. Officers and men were elated that training was done and soon they would be masters of their own LCIs.

Take a section of New York's Holland Tunnel. Put a bow and stern on it. Give it engines, propellers, and rudders. Add a bridge for the captain and you have an LST, or Landing Ship, Tank.

Of course you would have to add a few details such as a big ramp and bow doors which swing open like a garage, surround this floating tunnel with living compartments for the crew, and cover it like a porcupine with bristling AA guns.

But essentially that's the picture I got when I stood in the mammoth, white gleaming tank deck of an LST. Even the terrific roar and foul smell of a tunnel are there when huge ventilators suck out gases and big Sherman tanks whine and clank down the ramp (p. 19).

"Here's the natural place to begin a tour of an LST," said the Coast Guard skipper. "The tank deck is her reason for being. Around it centers the life of the ship.

"Here the men dry their laundry, play ping-pong and basketball, toss baseballs, rough-house, and do much of the ship's work," he explained. "When not carrying tanks and trucks, this vast space may be piled high with Army supplies, gas drums, telephone poles, ammunition—in fact, anything an army in the field may need. LSTs have even carried horses and mules. One skipper I know ferried a thousand Nazi prisoners across the Mediterranean" (page 14).

Scurrying up and down the tank deck, men were busily stacking and carrying boxes of dry stores, like a parade of leaf-cutter ants. As I watched, a little truck, like a cross between a jeep and an elevator, picked up a stack of canned peaches and whisked them down the deck, depositing them in front of a storeroom door.

"That's our Handy Andy," the skipper explained. "It saves many man-hours of work. All our men have to do is to stack the boxes and Handy Andy does the rest."

Every operation on an LST speeds loading and off-loading. If the enemy is bombing, strafing, and shelling the ship, she must be got off the beach in a hurry. Imagine completely unloading a big cargo ship in 45 minutes! Yet that's not unusual for an LST when she starts her tanks and trucks rolling down her ramp.

"Come forward and see the bow doors and ramp," the skipper said.

As we approached, the bow began to open like a secret door. Noiselessly, with no one

* See "Saboteur Mosquitoes," by Harry H. Stage, and "Life Story of the Mosquito," by Graham Fairchild, in the NATIONAL GEOGRAPHIC MAGAZINE for February, 1944.



U. S. Navy, Official

A Sailor's Home Is His Bunk

On it he keeps his hammock, mattress, blankets, and many of his belongings. In addition, he has a small locker for his clothes and trinkets. While the crew space is crowded on an LST, living conditions are as good as on a big man-of-war. Triple-deck bunks fold up during daytime to make room for mess tables and recreation. Soldiers live in narrow compartments on either side of the tank deck and have their own toilets, mess tables, and bunks.

apparently operating it, the ramp swung down on its hinge until it stuck straight out in front of the ship, like a giant's mighty tongue. Flanking it, jawlike doors yawned open.

"How did you drop the ramp so magically?" I asked the skipper.

Pointing to a glass window high in a corner of the tank deck, he said, "An electrician, posted in that cubbyhole, operates the bow doors and ramp. All the machinery is inside. That's the reason you hear little noise."

From time immemorial sailors have been trying to keep the hulls of their vessels watertight. Here was a skipper deliberately opening a great hole in his ship at the touch of a button!

"How do you keep water from leaking in?" I asked.

"The bow doors only streamline the hull, giving the ship a sharp prow," he explained.

"When closed, spray splashes through the cracks of the doors, but the ship is sealed by the ramp and rubber gaskets."

We climbed ladders to the ramp-control room. "When unloading tanks we station a traffic officer here," the skipper said. "Looking through the window, he controls the tanks with signals—red, amber, green. When he receives word that the ship is firmly beached, he flashes a green light and the tanks roar off the ship, clanking as they go and splashing through the water up to the beach. If a jam occurs ashore, he flashes the amber and then the red, stopping the procession."

Traffic in this nautical garage is all one way. There is no turning around. So loading an LST is like running a motion picture backwards.

Drivers need eyes in the back of their heads, for tanks and trucks must back up the



U. S. Navy, Official

No Drill This! A Nazi Shell Just Misses Army Ducks at Anzio

Here its giant geyser plumes up between columns of amphibious trucks. One loaded with box cargo is just crawling out. Spray and fragments from the blast fly over it. Empty Duck at left is about to shed its land role and become a boat like the others heading for transports offshore. Behind the fountain an LCT off-loads from her lowered ramp. Battered by the constant German fire, work-horse LCTs have played a vital role shuttling supplies to this Italian beachhead (page 12).

ramp and into the ship's cavernous depths. Yet LSTs have been loaded with some 80 vehicles in an hour and 34 minutes. And that includes time to chain the tanks to slots in the deck.

It is ticklish business if the vehicles are bound for the upper deck. Then they must back up a second steep ramp just inside the bow. Older ships use an elevator, but this is much too slow.

Walking aft, we passed through narrow troop spaces fitted with folding pipe berths and lockers. On swinging stools sailors were eating "chow" as if at a drugstore counter. Their cafeteria-style trays were piled with bowls of vegetable soup, roast beef, mashed potatoes and gravy, creamed cauliflower, bread and big chunks of butter, and coffee.

"We can serve 300 men—sailors and soldiers—quickly and efficiently," the captain said.

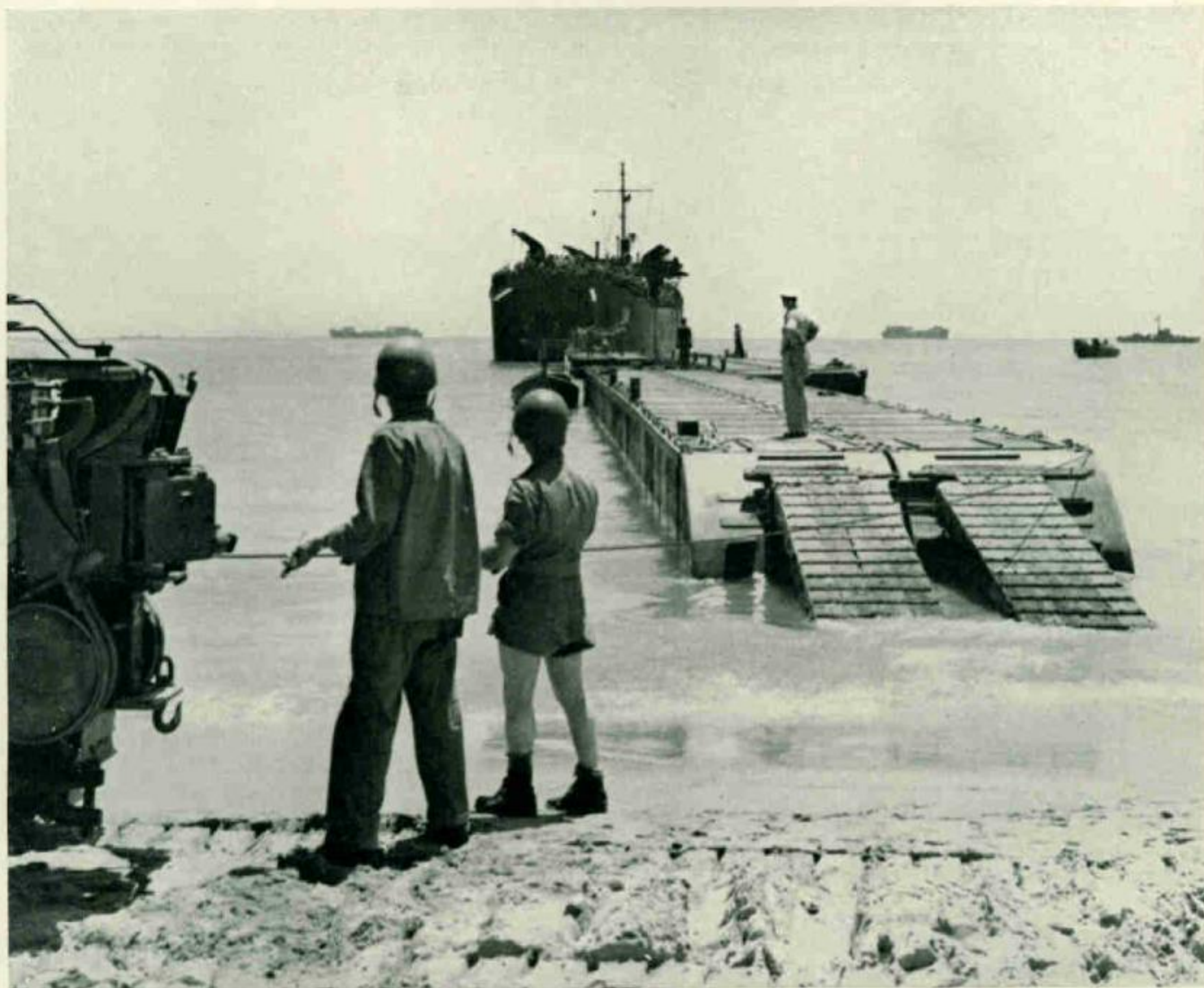
Farther aft we came to a large compartment filled with triple bunks, lockers, and tables (page 25). Living quarters for the crew and troops surround the tank deck like a big horseshoe.

LST Shoots Down Six Jap Planes at Vella Lavella

The main deck was cluttered with chimney-like ventilators, cargo hatches, winches, hawsers, anti-aircraft guns, tubs, and much other equipment (page 3).

An LST can put up a terrific anti-aircraft screen with her many guns. Six Jap planes in one day were bagged by an LST at Vella Lavella in the Solomons last August. Not bad for a squat, sluggish ferry that many consider "easy meat" for airplanes.

Taking up much of the deck were great wooden timbers, which appeared to be a ship's launching ways.



U. S. Navy, Official

Pontoon Bridges Caught the Germans by Surprise at Licata, Sicily

As this beach slopes gradually and big landing vessels can't get in close, the Germans felt it secure and left it lightly protected. But they reckoned without the Seabees, who developed these 175-foot steel pontoons. Hung from the sides of an LST, they are dropped near the beachhead and towed alongside. When the ship hits the shoal at full speed and stops, lines are cut and the pontoons float to shore under their own momentum. Here several are connected in tandem, forming a bridge from ramp to beach.

"When we go overseas we will carry an LCT on that cradle," the captain explained. "A crane will pick up the 105-foot craft as it would a toy and gently rest it on the ways. We will secure it firmly with chains and cables and then stow other landing craft on its tank deck. First, a 50-foot LCM will go in, and inside of that a 36-foot LCVP" (page 30).

"But how do you launch that pyramid of landing craft?" I inquired.

"That's a ticklish job," he replied. "At the advanced base a crane lifts out the small boats and the chains are removed. When all is ready, we heel the big mother ship down and pull the wooden wedges. The LCT slides sideways gracefully down the ways and drops into the sea. A big fountain splashes up between the two, acting as a sort of cushion. It's really very simple, and the two vessels never scrape their sides."

"Amazing! Does the LCT have to be docked to prepare her for sea?"

"No. Her crew pile aboard, start her engines, and off she chugs. She may come around immediately to the bow of her mother ship and take on tanks and cargo from the ramp. The whole maneuver is done as smoothly as a white swan launches her little cygnets from her back."

During lunch in the wardroom several officers who had commanded LSTs in the Mediterranean swapped yarns about their ships.

For the Sicily landings, a cargo of donkeys was stabled on the main deck of an LST. Tanks and vehicles crammed her tank deck. That LST became a donkey transport and tank ship all in one!

Lt. H. R. Fleck, USNR, commanding No. 386, told how his ship happened to be the first LST to land at Salerno. "Approach-



U. S. Navy, Official

Over the Side and Down the Rope Net Climb Salerno-bound Soldiers

Three or four usually go over together, lifting left legs first, placing feet on rungs, and gripping vertical strands with their hands so the man above will not step on their fingers. They are taught to keep step so they will not bump and slow the descent. Each carries his pack jammed with rations, Garand rifle, and water canteen. Overhead flies the transport's guardian barrage balloon.

ing the beach, we struck a mine which blew out 50 feet of our bottom and part of the starboard side, including a troop space. Naturally, I thought my ship would sink and headed for the nearest beach ahead of schedule. The Navy gave me a Silver Star for that, but I was only trying to save my ship!"

"Were you under fire?" I asked.

"Yes, while we landed tanks German 88-mms. shelled us for two hours until we retracted. We steamed under our own power, with that hole in our bottom, some 950 miles to Bizerte and thence to Oran. That's an LST for you. You can't sink them!"

"After the Sicily campaign, five LCTs were returning to Palermo," he continued. "Leap-frogging up the north coast, they had landed tanks at vital points behind the enemy. Now they were coming back to port battered, dirty, and tired. The flagship signaled them to pass close aboard for Admiral's inspection. The LCT boys were worried but obeyed orders. As they passed the big cruiser, the band played and all hands, including the Admiral, saluted the little LCTs."

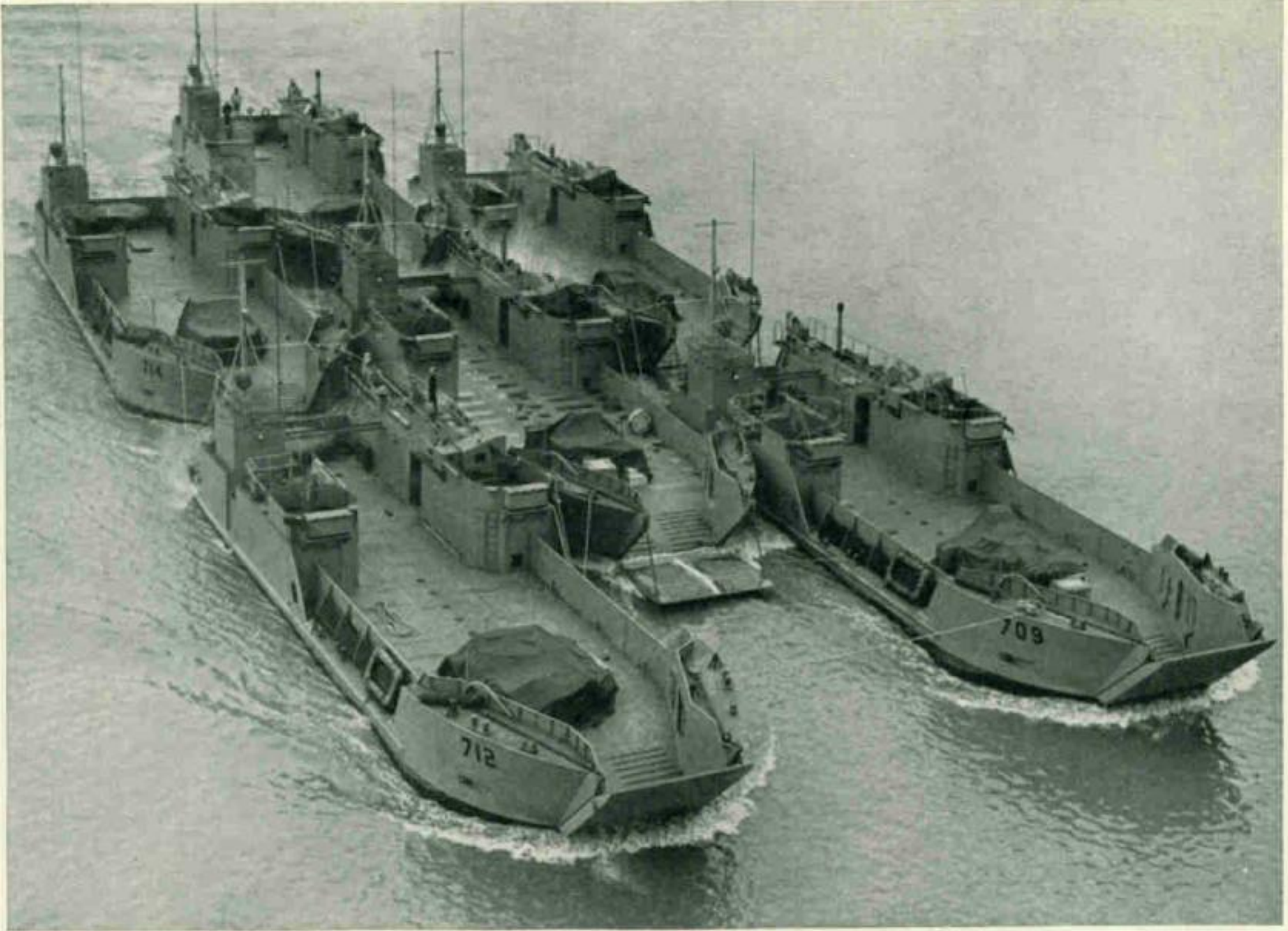
To show how an LST gets around, I quote a letter from Lt. Charles M. Brookfield, who wrote that fascinating article for the *GEOGRAPHIC* about finding a 17th-century British "Fourth Rate" wrecked on a Florida reef.* Lieutenant Brookfield now commands U. S. Coast Guard LST 21, which he calls *Blackjack Maru*.

LST "Blackjack Maru" Fought in Three Theaters

"During the past six months," he wrote in February, 1944, "the ten LSTs of our group, of which *Blackjack Maru* is flagship, have cruised over 25,000 miles, operating in all three theaters of war. We have earned two Bronze Stars on our ribbons, visited eight countries, four continents, and sailed through seven different seas. That's a record for flat-bottom 'dishpans' designed primarily for ramming the beach.

"Our crew claims this ship was the first in

* See "Cannon on Florida Reefs Solve Mystery of Sunken Ship," by Charles M. Brookfield, *NATIONAL GEOGRAPHIC MAGAZINE*, December, 1941.



U. S. Navy, Official

Down the Mississippi Come Six LCTs Built Far from the Sea on Rivers and Lakes

Ferry crews bring the Landing Craft, Tank downstream to New Orleans, where they are lifted aboard LSTs and sent overseas (page 30). This is the newest type, called Mark VI by the Navy. Hundreds of 327-foot LSTs, too, are built inland, many sailing 2,000 miles from Pittsburgh down the Ohio and Mississippi.

history to cross the Atlantic going sideways! LSTs have such high freeboard and shallow draft that the wind blows them off the course. Our navigator computed the leeway, as in sailing-ship days, and then plotted a 'crabbing' course.

"During the Italian invasion *Blackjack Maru* and a British LST loaded two motorized Canadian regiments for the east coast of Italy. Our ship had 71 vehicles aboard, nearly half of them General Sherman tanks—a very heavy load.

"When I showed their brigadier to a room, he brushed aside my apologies for his three roommates with the statement, 'Last night I slept on the floor!' There is always much camaraderie between the ship's crew and the Army. This is due largely to the commissary department, which serves the best possible meals to our guests. Of course there is some confusion over Navy terms, but by the end of the trip the soldiers refer to the 'deck' and 'ladder' instead of 'floor' and 'stairs.'

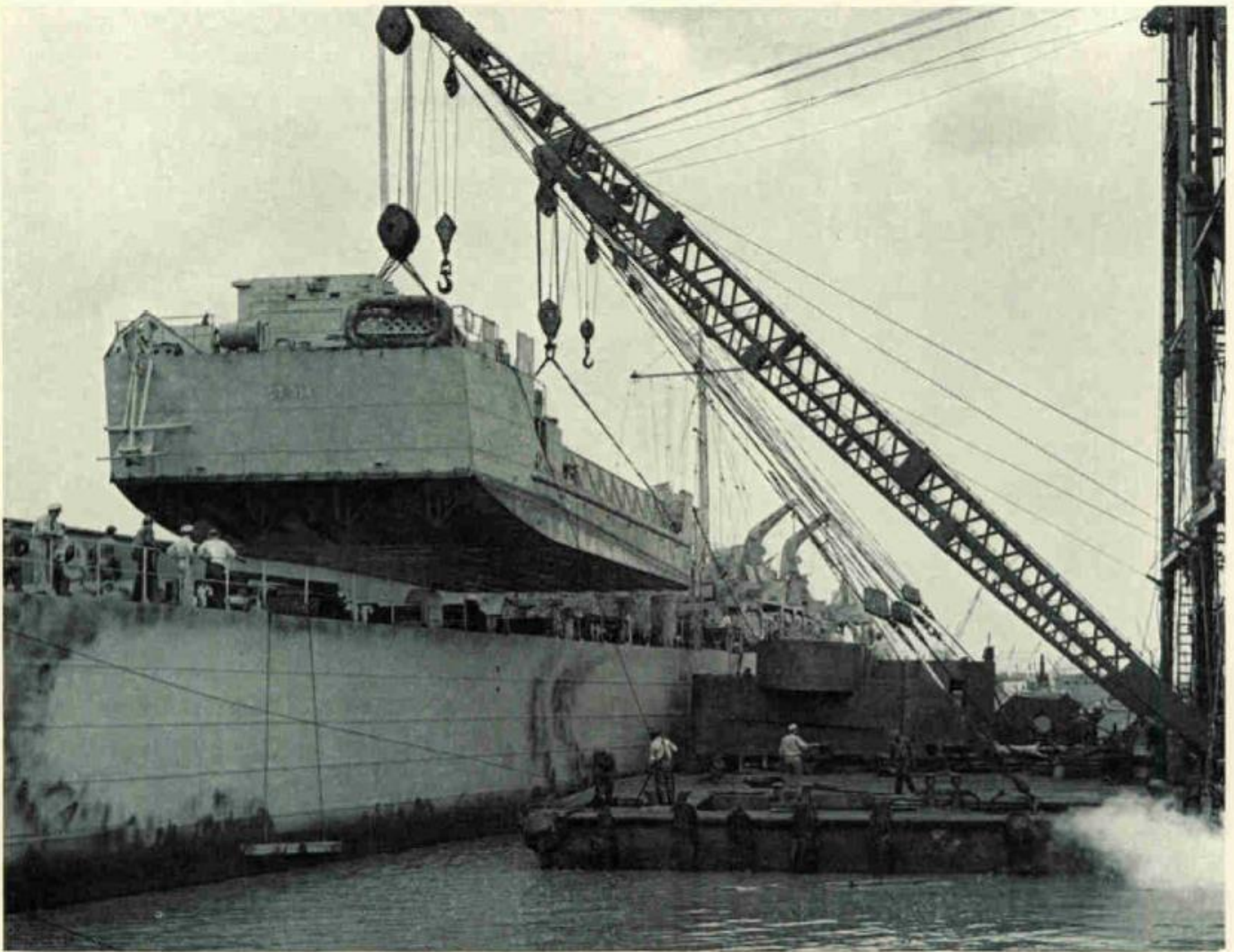
"Off Barletta we were ordered to Manfredonia, just captured by Commandos. For safety's sake we sneaked along close to shore,

our shallow draft making this possible. As we nosed in between the break-waters, I momentarily expected an explosion from a mine. Ships in the harbor with only masts and funnels above water were not reassuring.

"Keeping away from deeper parts of the harbor where mines might be, we let go our stern anchor, nosed up to the sea wall, and opened the bow doors. Commandos gathered around to watch the Shermans clatter down the ramp.

"The British 8th Army's drive through Italy was supported by these tanks, which took the enemy by surprise. We learned later that one of them captured a German general while he slept!

"Our 75th beaching took place in Jap-disputed territory. Our orders were to land 30-ton tanks at night on a beach too shallow for us. To overcome this difficulty, we ran up as far as possible at high water, waited for the tide to fall, off-loaded at low water so that the tanks wouldn't drown, and got out when the tide came in. If the Japs had spotted us 'monumented' on the beach, unable to move, we would have been 'duck soup.'



U. S. Navy, Official

A 112-ton LCT Is Hoisted Aboard a Mother Ship to Ride Pickaback to Battle

It will rest safely on timber launching ways, chained securely to the deck. When the LST reaches the front she will roll herself over by ballasting and slide the smaller craft into the sea with a mighty splash (page 27). This is the Mark V-type LCT, with deckhouse across the stern.

"We claim that *Blackjack Maru* and a sister ship are the first U. S. naval vessels ever to fly the Stars and Stripes in an offensive operation in Indian waters. The scene of action is probably the most remote from our shores in this or any U. S. war."

In the afternoon our 327-foot LST plodded out for beaching. Can this 2,160-ton ship really run itself aground, I wondered. Yet, like the other landing craft, she headed straight for the beach full speed.

"If you really want to get a thrill out of beaching," the captain said, "go down and climb out on the ramp."

Down many ladders and winding passages I hurried to the tank deck. Just as I arrived, the big ramp opened, mysteriously as ever.

Dead ahead I could see the beach with the tree-clad bank beyond. Wind whistled through the opening. Gingerly I climbed out on the 23-foot ramp to its tip and looked down at the ship's bow, a bone in its teeth. The waves roared like a waterfall.

"Hang on!" an officer shouted with cupped

hands. And it was lucky he did, for just then the ship hit the beach and I nearly fell off. Looking back over my shoulder, I saw the tremendous monster coming down on me, its huge mouth gaping as if to swallow me. I could see 208 feet down its gullet, the tank deck.

The ship rode up the beach for about 30 feet before stopping. Sand piled around her cutwater. A tidal wave rolled up, inundating the beach.

Retracting was much the same for the big tank ship as for smaller craft. Going astern with her engines and winching in her anchor, she gradually backed off.

Leaving the ship, Lieutenant Fleck bade me goodbye with these prophetic words: "There is not a single place on earth where we can invade enemy soil without crossing water or landing on a hostile shore. Airplanes and warships clear the way, but landing craft—*only landing craft*—take our armies to the enemy."

"Happy beachings!" I waved.