



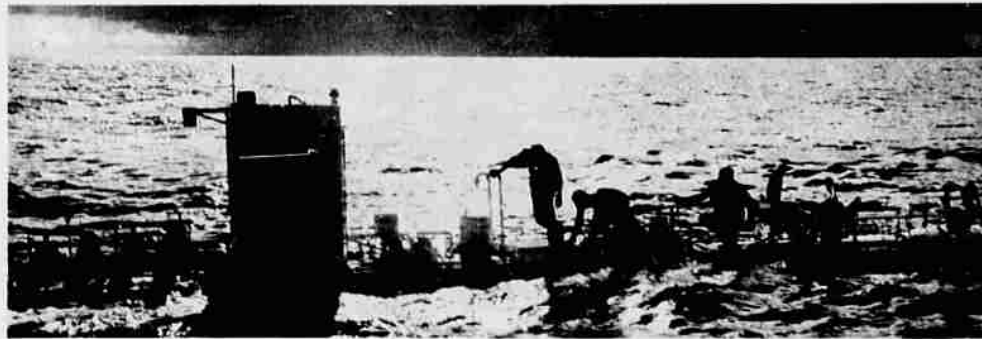
Direct bow view of the ill-fated Thresher before she was lost.

OUR ORDERS: "FIND THE THRESHER!"

Where is the graveyard of our lost nuclear sub and its 129 victims?
Here, revealing deep-sea detective work never before attempted,
is the stirring sequel to one of the worst disasters of 1963



By Capt. FRANK A. ANDREWS, U. S. N.
as told to Jack Ryan



The bathyscaph dived 1½ miles to find the wreckage but was handicapped by limited range and visibility.

SOMEWHERE within a 100-square-mile area, one-and-a-half miles beneath the sea, lie fragments of a 250-foot vessel whose fate shocked and sorrowed the Western world last spring.

Nobody has ever searched for such a relatively small object at such depths, but that was the job assigned to the Navy and civilian oceanographers immediately after the loss of our nuclear submarine *Thresher* with 129 men last April 10.

At 9:13 that morning, *Thresher* radioed her tender *Skylark*: "Experiencing minor problem. Have positive angle. Attempting to blow" (empty ballast tanks for surfacing).

From tests and expert testimony, Navy investigators have evolved a theory as to what caused the *Thresher's* loss. The salt-water piping system used to cool nuclear engines sprang a leak in the aft (engineering) compartment. At such depths, water rushes in at tremendous pressure, even from a minute rupture.

Thresher got in a "positive angle"—meaning an angle suitable for rising—and started up. But flooding very likely shorted the electrical circuits. Power was lost, and the sub slipped down.

Tests on models indicate that if the aft compartment collapsed first, then, under pressure, it became like a bullet and shot into the center compartment; the forward compartment folded in like a tin can. All this would happen in less than two minutes. *Thresher* then described a lazy spiral down to the floor, loose debris floating around her.

Now it was up to us to find this debris—and then narrow down our hunt until we could actually see the compartments themselves, 8,400 feet below the surface.

After the first month as on-scene commander of the search, I was beginning to wonder whether our scientific detection story would ever tell where *Thresher's* graveyard was. Four ships had crisscrossed the area where she had last tested and had traced the surface of the sea floor with sonar; each significant bump on the sonar graph could be an echo from *Thresher* wreckage. The trouble was that eventually we were to get 90 such "blips"—so many clues they only further jumbled our puzzle.

On May 19, I was back at base in New London, Conn., preparing for another go at *Thresher's* wreckage. Late in the evening the phone rang. Art Molloy, a top oceanographer at our analysis center at the Woods Hole Oceanographic Institution, was on the line: "You'd better get up here quick. I think we've photographed debris from *Thresher*—and at Delta."

"Delta" designated one of the sonar soundings which the Woods Hole experts were almost positive was wreckage. While other ships searched out new soundings, their vessel *Atlantis II* had concentrated on "Delta."

If their persistence had paid off, it would mean we could move closer to the ultimate search—sending down the Navy's bathyscaph *Trieste* with trained observers who could study the wreckage firsthand and take close-up photographs.

Not that we expected the wreckage to prove what happened to *Thresher*: the crushing pressure of the sea at 8,400 feet would not leave such evidence. Then why search for it if the