

# LIFE

THE BIG DIVE: SEVEN MILES  
DOWN TO SEA'S DEEPEST PIT



UNDERSEA ADVENTURERS  
AND THEIR STRANGE CRAFT

**FEBRUARY 15, 1960**

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## GIVING THE MOST TO SOME "MOSTS"

This week the people and events we show are, quite literally, "the most."

The boldest adventure left to man on earth has been to explore ocean's deepest floor. Two men in a weird U.S. Navy craft have just done it, and we got one to write the story of the historic seven-mile plunge to the bottom—how they got there, and what they saw in the eerie abyss (pp. 110-121).

The most sensational murder case in years is Los Angeles' Finch-Tregoff trial. We have a great suspense writer, Eric Ambler—remember *A Coffin for Dimitrios*?—tell why this courtroom drama is as macabre as anything he invented (pp. 22-29).

Making its most spectacular advance, the U.S. drug industry is working medical miracles. But this has also brought on sky-high drug bills. On pages 97-103 we look at wherefore of the price of wonder pills.

Never in U.S. history have so many people been reading and getting excited over poetry. If this surprises you, turn to pages 66-75 and see a "most" which we consider surprising—the stunning color photographs of Gordon Parks who interprets the works of U.S. poets in some of the most abstractly evocative photographs we have ever published.

Finally, we introduce a most spectacular new hero in baseball, a Dodger named Frank Howard (pp. 49-52). His feats are so astonishing that in order to find some basis of comparison we had to go back into baseball legend to "Swat" Milligan who clouted so hard that the ball streaked to kingdom come as a thin blue flame.



DIVERS ON BATHYSCAPH



"SWAT" HOWARD AT BAT

### COVER

Just after its epochal ocean dive, the U.S. Navy's bathyscaphe *Trieste* comes to surface far out in the Pacific. Perched in the conning tower are the divers, Lieut. Don Walsh (waving) and the Swiss oceanographer, Jacques Piccard (see pp. 110-121)

### THE WEEK'S EVENTS

The shock of the fascinating Finch affair absorbs the nation. The circus in the courtroom.

By Eric Ambler

Guest Mikoyan gets an explosive welcome down in Havana

My coal tar valentine: lipsticks face trouble unless federal law is changed

A giant U.S. missile finder takes shape in vital Arctic outpost

A poignant victory in the cold war: helped by Khrushchev, parents and children from Lithuania are reunited in Chicago

### EDITORIALS

Needed: a mightier shield  
Lincoln: wisdom for today

### PICTORIAL ESSAYS

Kaleidoscope of U.S. poetry: haunting loveliness based on modern verse is captured by the camera. Photographed for LIFE by Gordon Parks

Big pill bill to swallow: the wonder-drug makers get high profits from their captive consumers

### ADVENTURE

Two men in a strange U.S. craft achieve ultimate adventure on earth, reaching the ocean's greatest depths. One of them describes the plunge: "Our seven-mile dive to bottom." By Lieut. Don Walsh

### SPORTS

A slugging legend comes to life: when Dodger rookie Frank Howard clouts the ball, there is "a puff of smoke and a thin blue streak of flame."

By Marshall Smith

"Gung ho" at Squaw peak: leathernecks take on an unusual foe at this winter's Olympic site

### ENTERTAINMENT

You think you've too much to do? A juggler twirls and balances a dozen objects all at once

### MOVIES

A spoof on spies in old Havana: famous film figures prowls the town

### FASHION

New crush on kimonos: designers borrow the waist-deep sleeve style from oriental robes

### SCIENCE

New snowman clues: more "abominabilia" turn up in the Himalayas

### TELEVISION

TV gets laughs from its griefs: Nichols and May aim their caustic cracks at quiz mess

### PARTY

A sober way to get plastered

### OTHER DEPARTMENTS

Letters to the Editors  
Speaking of Pictures: memorial's majesty  
Miscellany: "shuffle off, buffalo"

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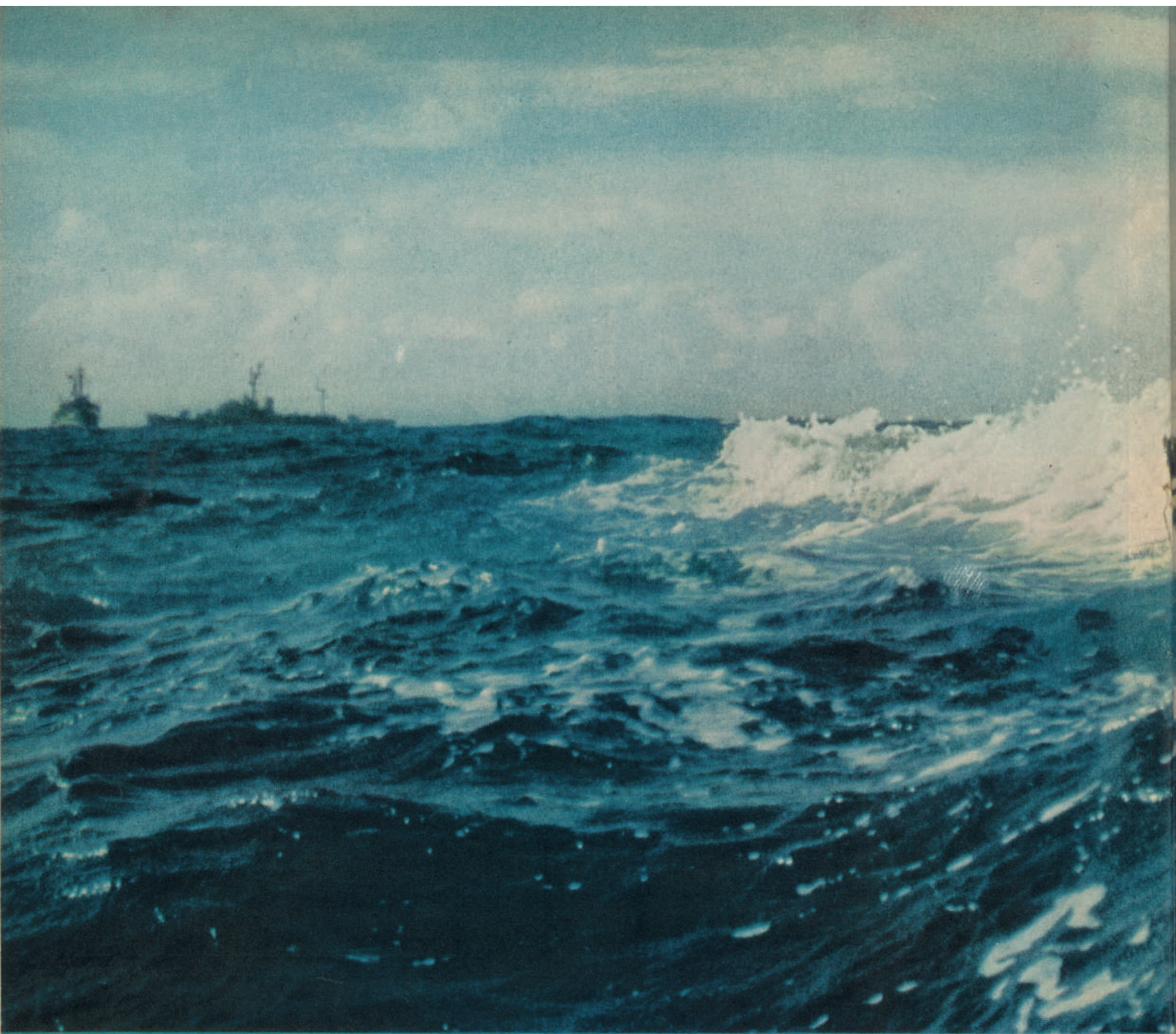
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# ACHIEVING THE ULTIMATE ADVENTURE ON EARTH

Up to the turbulent surface came a peculiar-looking craft, risen from the calm but dangerous depths of the ocean—and from the last great adventure of exploration left on earth. Man had climbed the highest mountains, traced the longest rivers to their sources, crossed the widest jungles and deserts and sledded over icy wastes to the polar ends of the earth. Now he had reached the one supremely extreme—and supremely inhospitable—region that remained unexplored: the bottom of the deepest ocean.

The conquest was made when a strange U.S. Navy underwater vessel called a bathyscaph touched down 37,800 feet under the Pacific on the floor of the Marianas Trench, thought to be the oceans' deepest. On board were Lieut. Don Walsh and Jacques Piccard, son of Auguste Piccard, who conceived the bathyscaph. On the following pages is the account of their experiences during the dramatic dive.

The craft in which they descended—the *Trieste*—was built in Italy and bought by the U.S.

Navy for underwater research conducted by the Navy Electronics Lab. A sort of deep-dive dirigible, it is basically a great flotation tank with a passenger gondola attached to its bottom. The gondola is made of 3½-inch steel to withstand the fantastic pressures of the abyss. To send the *Trieste* on its historic dive, air compartments within the tank were flooded and it sank. At the end of its descent, iron ballast was dropped and the craft rose slowly from the silted bottom seven miles below the surface.





**AFTER HISTORIC DIVE,** Jacques Piccard (*above, left*) and Lieut. Don Walsh wait in pitching conning tower to be picked up by boat from escort vessels at left.

**ROLLING IN SWELL,** bathyscaph makes mooring difficult for crew of rubber boat as they disembark Walsh (*in tower*) and Piccard (*standing below on deck*).







**EXHAUSTED BATHYSCAPHISTS** Walsh and Piccard are rowed back to comfort of escort vessel after their nine-hour ordeal in the abyss. Walsh, 28,

is an Annapolis man and an experienced submariner. Piccard, 37, is a bathyscaph expert who has worked on device with his father for more than a decade.





**READY TO START**, Walsh and Piccard are photographed through open hatch as they check instruments in cramped chamber before dive. After their exploit

President Eisenhower summoned both men to White House to give them awards. Walsh received Legion of Merit, Piccard the Distinguished Public Service Award.

# OUR 7-MILE DIVE TO BOTTOM

by LIEUT. DON WALSH

I HAD been fighting all night long just to stay in my bunk. The U.S.S. *Lewis* was rolling through heavy Pacific swells in her best destroyer escort manner. From midnight on, explosions from the stern had kept everyone aware that we were making depth soundings. I may have slept a little, but when someone shook me fully awake at 6 a.m., it was a relief. I could get up now, and all I had to do that day was get into a small steel ball and dive to the bottom of the deepest part of the world's deepest ocean, the "Challenger Deep." We estimated this spot, which is part of the Marianas Trench, to be about six miles in depth at the point we had chosen. I had the momentary feeling that it might be wiser to stay in bed.

The whole thing had a sort of dream quality anyhow. Less than a year ago I had a good,

safe staff job in San Diego. Then I learned the Navy had bought the bathyscaph *Trieste* for deep water experiments. When I heard that submarine officers were being sought for the project, I volunteered. (When I was accepted, my friends gave me the phony title of COM-BATHPAC—commander of bathyscaph, Pacific.)

That was how I happened to wake up aboard the *Lewis*, officer-in-charge of the strangest craft in the Navy. It could not fight or run or dodge. All it could do was go straight down. And today we would be going down many times farther than the strongest submarine could go—on our own, completely beyond help.

I dressed and went on deck. Sunrise and the start of the dive were nearly two hours away. The swells looked high and mean and the wind seemed to have freshened during the night.

A mile astern I could see the lights of the Navy tug *Wandank*. Behind her, riding on 600 feet of cable, was the *Trieste*. Towing the *Trieste* nearly 200 miles from Guam had not been easy. She is about as well suited to the high seas as your house is to travel on a superhighway. Jacques Piccard, who would make the dive with me, was aboard the *Wandank*. He is the son of Auguste Piccard, the Swiss scientist who designed the bathyscaph. Jacques helped his father build the *Trieste* and has been with her ever since, watching over her as fiercely as a tigress watches over her cubs. No man has made more dives than Jacques, though squeezing his 6-foot-7 frame into the bathyscaph's cramped sphere is quite a trick.

I climbed up to the bridge and joined Dr. Andreas B. Rechnitzer, the scientific director



of Project Nekton, which is the name given by the Navy to the series of dives we were making off Guam. (Nekton is sea life that can swim against the current, as opposed to plankton, which cannot.) At the moment, Andy was trying to find the deepest possible place for us to make the big dive. "Throw one in," he said to a young sailor sitting beside him. The sailor spoke to the fantail through his headset. There was a blast we could hear all over the ship as three pounds of TNT exploded just beneath the surface. Andy punched a stopwatch. Fourteen seconds later his Fathometer headphones crackled as the echo from the bottom reached us.

A quick calculation told us the depth here was 33,600 feet, figuring the speed of sound through water at 4,800 feet per second. "Son," said Andy, "we have really found you a hole." He looked happy. Only a few days earlier he had received a bitter disappointment. The original plan was that Andy and I would make the dive together. Then we got instructions that it was to be Jacques and I. Andy's spirits had been partially lifted when we were promised that we could later make a second dive into the Challenger Deep, this one with Andy aboard.

Breakfast for me that morning was a skimpy affair of orange juice, dry toast and tea. A lot of food and liquid can make you uncomfortable if you're cooped up in one position for nine or 10 hours. As I was finishing, Andy came down. "Just see one animal down there," he pleaded. "That's all it takes. Just one of anything."

I told him that I'd probably look so hard I'd see something even if it wasn't there. That seemed to satisfy him.

"And if you don't find the deepest part of the hole," he added, "I will. The second liar's always got a better chance."

I shaved (don't ask me why) and went aft to get into the *Lewis* whaleboat. It was 7:30 by this time and beginning to get light. Rain was falling around us in patches. The whaleboat was pitching violently against the steel hull of the *Lewis*, rising and falling as much as 10 or 15 feet. I think that trying to get aboard that whaleboat was the hairiest thing I did all day.

### The damaged bathyscaph

ON the *Trieste*, two men were waiting for us: Lieut. Lawrence Shumaker, assistant officer-in-charge of the bathyscaph, and Giuseppe Buono, the master mechanic from Naples who, like Jacques, has been with the *Trieste* ever since she was built. Larry and Giuseppe were going to handle the tricky topside work that had to be done before we could make the dive.

We discovered that the *Trieste* had been damaged during the long, rough tow. The telephone which would enable us to talk from the sphere to the conning tower, 18 feet above, had been torn off. This meant that once Jacques and I were locked inside the sphere before the

dive, we could not communicate with Larry and Buono on deck. We would be cut off until we were completely submerged and could use our underwater telephone. The vertical current meter, by which we expected to measure precisely our rate of descent and ascent, had also been ripped off by the sea.

Timing a roll properly (if you don't, you wind up with a nasty fall), I clambered into

wet shoes coming down the ladder. His feet poked in through the hatch and shortly all 6-foot-7 of him was inside the sphere with me.

Behind him was Buono. There is a certain formal leave-taking we go through with Buono before each dive. "Mille grazie. Arrivederci," he says to Jacques, and Jacques says it back to him. Then, in his Neapolitan-accented English, he thanks me and says goodbye and I do the same to him. Then all three of us—Buono outside, Jacques and I inside—lower the big steel hatch into place. We tighten the bolts on our side until each is so tight that the grease remaining on the machined surface is squeezed out of the joint.

Now, if everything went well, we would be on our way within 10 minutes. Through the porthole in the middle of the hatch, Jacques made an all-well signal with a flashlight to Buono, crouching in the antechamber. We saw Buono disappear up the ladder. In a minute he had opened a valve and in three minutes the passageway was flooded—and we were trapped in the sphere for the duration of the voyage.

The process of descending and rising in the bathyscaph is a somewhat complicated one in which sea water and iron shot serve as ballast, while gasoline (which is lighter than water) provides buoyancy (see diagram). Now, topside, Larry and Buono were carefully opening the ballast tanks, letting an extra two tons of sea water run into the float. If we had figured everything exactly right,

this would add enough weight to start us down. It did. In fact, we started down so rapidly that Larry and Buono had a touchy time getting off the *Trieste* and back into their rubber boat.

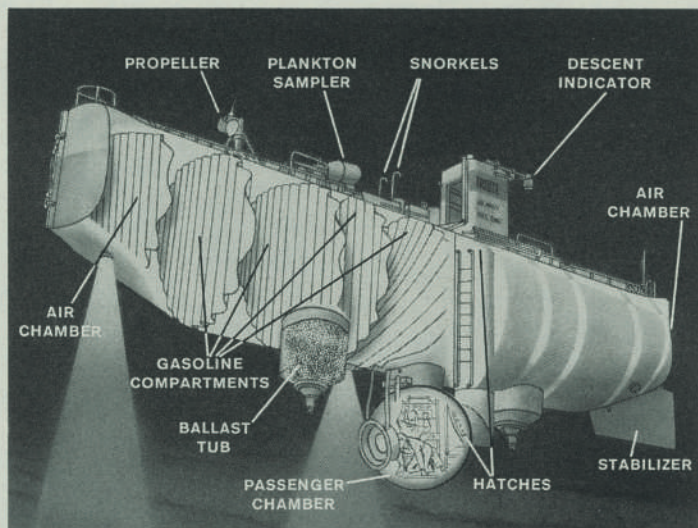
In the sphere, of course, we didn't know any of this, but three things always happen on the *Trieste* when she's on her way, and all of them happened at once today: the needle on our sensitive depth gauge began to quiver downward, the rocking motion of the sphere became perceptibly less violent and—why this happens we have never been able to figure out—the stern settled by a degree or so.

Afterward someone told me that a sailor on the bridge of the *Lewis* noted our disappearance with a bilingual pun: "Bonjour, Trieste!"

After we had been under way for four minutes I called the *Lewis* on the underwater telephone and reported that we were all right and passing 250 feet. I also told them about losing our topside telephone and the current meter. By the time I had finished, we were at 300 feet.

At that point we encountered the thermocline, a layer where the water temperature drops sharply. Since the cold water was denser than the water we had been passing through, we became relatively more buoyant and stopped. We had expected this. Part of our standard diving procedure is to use this brief halt as an opportunity to make a final instrument check. Then, by releasing a little gasoline from our maneuvering tank, we get rid of some of our excess buoyancy and start down again.

But this thermocline appeared to be a little different from most. We released the gasoline,



**HOW STRANGE CRAFT WORKS** is shown here. The bathyscaph operates basically like a balloon. It consists of a buoyant tank with a passenger chamber attached to the bottom. A balloon gets its buoyancy by being filled with lighter-than-air gas; the bathyscaph tank gets its buoyancy by being filled with lighter-than-water gasoline. When divers want to descend, they release gasoline, just as aeronauts release gas. To rise, they drop ballast. (Air chambers give extra buoyancy for surface towing, are flooded before dive.) Passenger chamber is heavily built to withstand tremendous deep-water pressures. The tank is lightly built, but an opening is provided in bottom through which sea water enters, equalizes pressure inside and outside as craft descends. Propellers on top are battery-powered, enable bathyscaph to maneuver at bottom of sea.

the conning tower and started down the long ladder to the sphere. By now I was soaked. At the bottom, I had to time another roll of the *Trieste* to raise the hatch into the sphere itself. This hatch looks like the entrance to a small bank vault, and if you don't catch it just right, it can swing up and knock you flat.

The familiar odor of rubber and solvent came to me as I slid through the hatch. The machined surfaces of the hatch are covered with a compound of grease and white lead. As usual, the seat of my pants swabbed up a good bit of it on the way through, acquiring a long, dark smear. Service stripes, we call them.

The sphere seemed to have stood the trip very well. Before leaving Guam, we had packed it with 40 bags of silica gel, an absorbent, to keep the instruments dry. As a result, while the humidity outside was close to 85%, inside it was only about 12%. My shirt, from which I had wrung a quart of water before opening the hatch, began to dry out, and I started getting the sphere ready for the trip. I looked over the instruments and batteries, checked the bilges, saw that the oxygen and air regenerators were in good condition. I moved the bags of silica gel out of the way and felt through the extra clothing we had put in the sphere to see whether it was still dry. It was. I switched on the tape recorder into which I would dictate notes during the trip, and said, "This is dive number 70, U.S. Navy Electronics Laboratory, Walsh and Picard."

I heard the hatch at the top of the shaft open and then the squish, squish of Jacques'





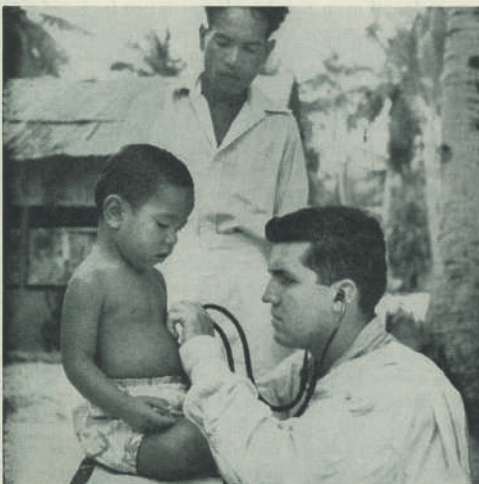
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## HELP LAUNCH HOPE