

Ben Franklin exploring 'inner space' on Gulf Stream drift

While the astronauts were emerging from LM onto the moon, six men in the submersible Ben Franklin were exploring the Gulf Stream off the east coast of Florida. They were without TV contact, "except fish," but they did send this message to the Apollo 11 crew: "We all wish you fair wind and a following sea. Good luck."

The Ben Franklin, designed by Dr. Jacques Piccard and built by Grumman, began its northward underwater journey from Palm Beach on Monday, July 14, at 8:45 p.m. By early last week it had moved at a slow two knots or so as far north as Savannah, Ga. It is drifting along in the Gulf Stream "river" taking radar readings and stereo pictures of the Continental Shelf and studying the underwater life and the characteristics of the Gulf Stream.

NASA researchers and Grumman people working on future space plans are highly interested in physiological and psychological studies the crew is participating in during this laboratory-like mission (in some ways very comparable to a prolonged trip in space). The crew will be learning new things about this new environment just as astronauts are learning more and more about the space environment.

The Ben Franklin is drifting northeast, accompanied by the escort ship Privateer and the oceanographic ship USNS Lynch. The vessel has a crew of six and the life support capability of 42 days for that number.

Dr. Piccard is mission leader, and Grumman skipper Don Kazimer is in command of the Ben Franklin. The other members of the crew are Erwin Aebersold, Swiss pilot; R. Frank Busby, U.S. Naval Oceanographic Office scientist; Ken Haigh, British Royal Naval acoustician and exchange scientist in



Set to go. Off Palm Beach, Ben Franklin gets complete check before start of northward drift. Manned by crew of six, submersible has as some of its objectives the study of the Gulf Stream, Continental Shelf, 'inner space' environment.

the Naval Oceanographic Office; and Chester B. May, NASA researcher.

Early in the mission, Kazimir telephoned to the surface support ship Privateer that the crew had settled down to its predetermined routine and to "the scientific program as scheduled." The six explorers, he added, were "comfortable in the 62-degree, 73-percent relative humidity interior of the submarine."

A message received July 17 at Mission Alert in Plant 22, Bethpage, had these characteristic bits of information: "Ben Franklin continues at 650 feet drifting northward. . . . A single 250-watt light illuminated many plankton varieties, engrossing the entire crew at times last night. . . . A 30-foot Medusa with some sections four inches in diameter brought the men to their feet. . . . The radio news broadcast was piped

down to the crew on the underwater telephone. . . . Conditions continue good."

A pair of 35 mm cameras with two 250-watt strobe lights linked to them are used for photographing the ocean bottom, and a pair of 70 mm cameras mounted on a "pan and tilt" mechanism used in tandem with closed-circuit TV, can photograph the bottom and the marine life in the vicinity. The latter cameras, using color film and strobes, will be able to take stereo photographs of fish at a distance of 20 feet. There are also still and motion picture cameras aboard.

Acoustic instrumentation has been installed on the Ben Franklin by which the crew hopes to locate the biological phenomenon known as the Deep Scattering Layer—great masses of vegetable and animal plankton migrating up and down in the ocean.

Meals for the crew are freeze-dried food reconstituted with hot water. A typical breakfast includes orange crystals, instant scrambled egg, bacon bar, pecan roll, coffee. A dinner might include chicken soup, ham, apple sauce, mashed potato, peas, carrots, and coffee.

The hot water is stored aboard in four insulated tanks and is used for food preparation and washing and showering only.

As far north as Cape Hatteras the Ben Franklin is scheduled to drift over the Continental Shelf, and then it will be over much deeper water. The men have no sense of movement, since they are traveling with the same cubic mile of water all the way.

From West Palm Beach, operations are being directed by Program Manager Walter Muench, who reported at press time that the Gulf Stream was bearing Ben Franklin due east of Savannah.

. . . and new president of Grumman International

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World War II interrupted further study then, and he joined the Army Air Corps, serving as a group and squadron staff flight engineer, 1943-45. He was among the first crew members assigned to the B-29 bomber, and he earned the Distinguished Flying Cross and Air Medal with five Oak Leaf Clusters.

He went to Harvard, and after re-

ceiving his law degree from Harvard Law School in 1947 was assistant counsel with the Department of the Navy in Washington, D. C. During this period he was admitted to the Bars of the U. S. District Court for the District of Columbia, the U. S. Court of Appeals, the U. S. Court of Claims, and the New York State Bar.

In 1951 Evans joined Grumman Air-

craft Engineering Corporation and served as associate general counsel until 1958, when he was appointed general counsel. Two years later he became Vice President, and in 1963, Senior Vice President. He was elected President of Grumman and a member of the Board of Directors in May of 1966.

Last March Lew Evans was honored by NASA with the Public Service Award "for his outstanding contribution as a key leader of the Government/Industry Team which made possible the exceptional success of Apollo 9, the first manned flight of the Lunar Module."

Tennis, hunting, and fishing are among Lew Evans' hobbies.

He and his wife have one son, Llewellyn Jr., (Bud), a student at Cornell Law School, and they live in Brookville.

Joined firm in '36

George F. Titterton, retired Senior Vice President of Grumman and member of the Grumman Corporation Board of Directors, is also a Director of Grumman Aerospace. He maintains his home on Long Island and continues to identify himself with the operations and future prospects of Grumman Corpora-

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Bill Zarkowsky
Aerospace director



Tom Cheatam
Heads G.I.I.