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INTERIOR DEPARTMENT TO COMMISSION RESEARCH VESSEL TOWNSEND CROMWELL

The Interior Department's Bureau of Commercial Fisheries will commission its newest research vessel, the Townsend Cromwell, January 25, at Honolulu.

Secretary of the Interior Stewart L. Udall said the vessel is named in honor of a Department oceanographer who discovered in 1951 a major Pacific Ocean current which now carries his name.

The commissioning ceremony will take place at 2 p.m. at the Bureau's dock at Kewalo Basin. Special guests will include Mrs. Katherine Cromwell of La Jolla, Calif., widow of the oceanographer.

The new vessel is designed to provide increased range, more seaworthiness, and a greater variety of research facilities for extended cruises. Director Donald L. McKernan of the Bureau of Commercial Fisheries said the Cromwell will contribute greatly to the study of fishery resources and oceanographic environment of the Pacific.

The young scientist for whom the vessel Cromwell is named made his discovery while taking part in research aboard the vessel Hugh M. Smith in the equatorial region of the Pacific. He noted that as the ship drifted westward with the South Equatorial Current, fishing gear at the end of long lines was pulled rapidly to the east.

Cromwell led another expedition to the area the following year and confirmed existence of an under current about 300 feet below the surface rushing to the east at speeds up to 3 knots. Later measures showed that the current is about 3,500 miles long and about 150 miles wide. Its flow is measured at about 30 million cubic meters a second--equivalent in volume to the Florida Current.

The discovery has been hailed as a major oceanographic find. Existence of three other major equatorial currents in the Pacific had been known for more than a century, but until Cromwell's discovery, there were many inconsistencies in information about the circulation of water in the area.

The importance of the discovery was explained by John C. Marr, Area Director of the Bureau's Hawaii Area.

"It was known that east and west flows of water in the Pacific should balance, or water would pile up somewhere," Marr said. "Cromwell's discovery cleared up a lot of doubts about how the balance was achieved."

He said knowledge of the Cromwell Current is of great value to theoretical oceanographers who investigate the dynamics of the ocean.

"The current also is bound to have a marked effect on temperatures along the Equator," Marr said, because it is carrying warm water to the east Pacific, an area that is made up mostly of cold water."

Cromwell was killed in a plane crash June 2, 1958, near Guadalajara, Mexico, while en route to join a research expedition in the east Pacific. He was 35 years old.

The research vessel which bears his name was constructed in Louisiana at a cost of $1,700,000. It is powered by diesel engines and has an overall length of 158 feet. The Cromwell has a range of about 10,000 miles and cruising speed of 12 knots. Her complement of 25 men will include 7 scientists. She will be able to cruise up to two months without refueling. The captain will be Robert Lee, who has been Master on other Bureau vessels in the central Pacific.

The vessel is designed to enable scientists to continue their work during rough weather. There are anti-roll features and a bulbous nose under the bow which will dampen pitching from fore to aft.

The bulbous nose also will serve as a viewing chamber to permit observations and photographs of marine animals underwater. The high transparency of the tropical Pacific in daylight permits visibility for several hundred feet.

The Cromwell will be equipped for a wide variety of oceanographic studies. These will include measurements of temperatures, salinities, and chemical nutrients at all ocean depths. There also will be biological research of plankton and larger animals.

Area Director Marr said that the Cromwell will engage in oceanographic studies and in experimental fishing to learn more of the basic processes in the ocean and to find new areas where fish may be caught, particularly tuna.

Beginning in the early summer of 1965, the Bureau of Commercial Fisheries will use the Cromwell to participate with other Government agencies in the Pacific Trade Wind Zone Oceanographic Program, a two-year cooperative study.

The study is expected to provide information on interactions between the atmosphere and the ocean that affect our climate and even the distribution of fish. This phase of the research will try to determine how weather is affected when the ocean absorbs heat in one part of the world and transports it to another.

The study program will be centered on Hawaii and will cover a rectangular area of the Pacific roughly the size of the United States.

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