

Obituary Notice Renowned Physicist and Inventor of Wetsuit: Hugh Bradner

A renowned physicist and professor, Hugh Bradner built a successful career by combining his passion for science and ocean exploration

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Hugh Bradner, renowned physicist and professor emeritus at Scripps Institution of Oceanography, UC San Diego, died May 5, 2008, in San Diego, Calif. after a prolonged illness. He was 92 years old. Bradner's scientific career incorporated both science and ocean exploration to design many notable ocean technologies, including the first neoprene wetsuit. He has been affiliated with Scripps since 1961 and was professor emeritus at the Cecil H. and Ida M. Green Institute of Geophysics and Planetary Physics (IGPP).

During his distinguished career as a nuclear physicist, Bradner worked at the U.S. Naval Ordnance Laboratory in Washington D.C. and the Lawrence Radiation Laboratory at UC Berkeley. He was also one of the founding scientists of the Los Alamos National Laboratory working on the Manhattan Project and a faculty member at Scripps Institution of Oceanography and UC San Diego. It was at Los Alamos that he met Marjorie Hall, his wife of 65 years.

Bradner had a lifelong passion for the ocean. He enjoyed diving and sailing and was one of the first Americans to make a deep-water SCUBA dive. In 1951, while working at UC Berkeley, he decided to spend some "weekend time" improving diving equipment for navy frogmen, which began his pioneering research on the wetsuit. Bradner focused on the design of a wet suit for military underwater swimmers and developed a foam wet suit using a unicellular material known as neoprene.

"He was an adventurous man who enjoyed traveling," said Walter Munk, professor emeritus and director of IGPP during Bradner's tenure at Scripps. "He built a successful career by combining his geophysical work with his South Pacific adventures."

Bradner collaborated with scientific divers at Scripps Institution of Oceanography who were experimenting with the new SCUBA regulator invented by Jacques Cousteau and Emile Gagnan. Scripps divers first tested his wet suit designs at their SCUBA training classes held in the pool of the La Jolla Beach and Tennis Club.

"Brad's neoprene wetsuit was a tremendous contribution to scientific diving," said James Stewart, professor emeritus at Scripps. "He was a great guy and a lot of fun to work with."

Bradner was well regarded for his collaborative approach to science, evident in his reluctance to claim himself as sole inventor of the wetsuit. He continued to consult for the military throughout his scientific career. His other research endeavors led to novel diving equipment, including underwater contact lenses, a single-hose regulator and a decompression meter. Bradner even developed a loop system for quickly extracting U.S. Navy SEALs from the water via inflatable boats.

In 1961, Bradner joined Scripps as a research geophysicist in the Institute of Geophysics and Planetary Physics. He became a professor in 1964. He served as acting provost of UC San Diego's Revelle College during 1966-1967 and remained at Scripps and UCSD until his retirement in 1980. Bradner published extensively in the fields of physics, seismology, geophysics and diving. He also was co-author of a monograph on the radulae of the cowrie seashell, thus combining his scientific and recreational interests. He was a member of the DUMAND (Deep Muon and Neutrino Detection) Steering Committee.

Bradner was a fellow of the American Physical Society, a member of Phi Beta Kappa and Sigma Xi honors societies, the American Geophysical Union and the Seismological Society of America. He was active in a number of local organizations and served on the San Diego Planetarium Joint Powers Board 1969-1970 and the board of the San Diego Hall of Science. He was a member of the La Jolla Symphony Orchestra and Chorus and a member of the American Surfing Association. He was active in the Explorers Club of San Diego and the La Jolla Play Readers, as well as various other civic organizations. He served as a member of the UCSD Committee on Athletics, the Intercampus Athletic Advisory Board and the National Association of Intercollegiate Athletics. He served on many national, state and university committees concerned with diving safety.

Bradner enjoyed life to the fullest. He was an avid outdoorsman hiking in the Sierra Nevada Mountains, swimming in the La Jolla Rough Water Swim, and traveling all over the world to enjoy the oceans. He turned scientific inquiry into fun. He was a true teacher. His greatest joy was to watch as he guided students, family and friends to the discovery of something new. He was a painter, a photographer, a jeweler - a creator of new visions, be they intellectual or artistic.

Bradner graduated from the California Institute of Technology (Caltech) with a Ph.D. in physics, where he coached the swimming and water polo teams. Bradner received his undergraduate degree from the Miami University in Ohio and received the Miami University medal in 1960 and an honorary doctorate in 1961.

He is survived by a daughter, Bari Bradner Cornet of Berkeley, Calif., three grandchildren and a great granddaughter. His wife, Marjorie Hall Bradner, passed away on April 10, 2008.

The family requests gifts in his memory to The Hugh and Marjorie Bradner Endowment at Scripps Institution of Oceanography. A memorial service for Hugh and Marjorie Bradner will be held at Scripps Institution of Oceanography at a later date.

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