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J. Morgan Wells, Aquanaut

MC 005

Papers

1965, 1970-1971

.25 linear ft.

Mother Nature provided the planet Earth with a Nitrox atmosphere known as air. She never said it was the best breathing medium for divers. -J. Morgan Wells, Ph.D.



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J. Morgan Wells, Jr., Aquanaut

Biographical Sketch

John Morgan Wells, Jr. was born in Hopewell, Virginia on April 12, 1940. He received his B.S. degree in 1962 from Randolph-Macon College. In 1969 he received his Ph.D. in marine biology from the University of California, San Diego. His thesis is titled: *Pressure and Hemoglobin Oxygenation*.

“Wells began diving at the age of 14, after making his own surface-supplied diving system out of a point sprayer and a motor scooter engine. Two years later, he made an oxygen rebreather from war surplus parts by following diagrams in the U.S. Navy Diving Manual, and by the age of 19, he was teaching scuba classes at the college level.

During his 30-career, he worked as a medical school professor and research physiologist, as science coordinator for NOAA’s Manned Underwater Science and Technology Office, as director of NOAA Diving Programs, and finally as the director of NOAA’s EDU and Dive Programs. Dr. Wells is known for having lived on the ocean floor in saturation habitats longer and in more different systems than any other diver...he has dived in numerous locations from the Pacific to the Arctic. He has designed and developed underwater diving systems and researched and published tables that can be used to determine gas mixtures for people using diving equipment.” – John Wozny

“ Divers Examine BAYLAB in Milford Haven.” *Gloucester-Mathews Gazette Journal*, Oct. 3, 2002.

From 1969-1972 he was a resident physiologist at Wrightsville Marine Bio-Med Laboratory, North Carolina; 1970-1972 he was Assistant Professor of Physiology at the School of Medicine, University of North Carolina; 1972-1979 he was Science Coordinator-Marine Biology at the Manned Undersea Science & Technology Office; 1979-1991 Director, Diving Program; 1984-1985 Guest Scientist, Naval Medical Research Institution; and 1991 to retirement, Director, Experimental Diving Unit, NOAA.

In 1965, Wells was a member of the last team of aquanauts on SeaLab II, the US Navy’s “Man-in-the-Sea” program. The importance of this program was heightened by the sinking of the nuclear-powered submarine, USS *Thresher* (SSN593) off the coast of Cape Cod, MA during diving tests on April 10, 1963. SeaLab II was placed in the La Jolla Canyon off the coast of California. Part of the program included the training of the Navy’s bottlenose dolphin, “Tuffy.”

During his employment with NOAA, he became the 1st director of the NOAA Experimental Diving Unit and Dive Programs at Fort Eustis and NOAA Dive Program Director. During the 1970s, Wells, as diving officer for NOAA, began instituting diving procedures for oxygen-enriched air. Eventually the standard became known as Nitrox I (standard published in 1978) and Nitrox II (standard published in 1990). Dr. Wells worked with Dick Rutkowski in NOAA developing the use of Nitrox diving. Wells has written numerous articles on the use of Nitrox for divers. He continues to test and evaluate new equipment. The concept of Equivalent Air Depth (EAD) was first introduced by Wells in 1970.

Dr. Wells was an aquanaut on one of the Tektite II teams in 1970. Tektite II was a seven month mission on the bottom of Great Lameshur Bay on the south shore of St. John, U.S. Virgin Islands in 1970. The mission included both a scientific survey of the sea frontier and human factors in space exploration. The habitat was built by General Electric and sponsored by the National Aeronautics and Space Administration (NASA) along with other government agencies, colleges, and industry. It housed a series of research teams including an all-woman team.

Recognizing that physicians had little training in hyperbaric medicine, he began teaching a two-week advanced training course in hyperbaric medicine at the NOAA Diving Center in Seattle, WA. and continues to teach courses in diving medicine to physicians.

In retirement, Wells has been intimately involved with the Undersea Research Foundation, which he co-founded along with Jim Devereaux and Charlie Depping. BAYLAB, created in 1991, is a research facility developed by the Undersea Research Foundation designed to educate people about underwater life in the Chesapeake Bay. The Foundation, under the direction of Wells, has created the Chesapeake Bay Underwater Video Library.

Memberships include: International Board of Advisors of IAND, Inc./IANTD; Chief Scientist for the Scientific Cooperative Operational Research Foundation (SCORE); Undersea & Hyperbaric Medical Society; American Academy of Underwater Science and National Association of Diver Medical Technology.

In 1993 he received the Leonard Greenstone Diving Safety Award from NAUI Ethics and Quality Assurance.

Introduction

Morgan Wells was an aquanaut on both SeaLab II (1965) and Tektite II (1970). While on both missions, he writes to “Debb” about life at the bottom of the sea. While onboard Tektite II, the crew experienced an earthquake, thunderstorms, and near miss of a hurricane. Wells writes about evacuation for a hurricane in his letter of August 30, 1970. A newspaper clipping records the return of Wells, along with fellow aquanauts following a training mission in Florida for the SeaLab II mission.

The collection is open for research by appointment. Materials are in English. Please contact the archivist in charge regarding the photocopying policy for this collection. When citing the collection, the is suggested:

J. Morgan Well, Jr. Collection. MC005. Series ____. Jack K. Williams Library. Texas A&M University at Galveston. Galveston, TX.

Scope and Contents

The .25 linear ft. collection contains items dating 1965 and 1970-71. The collection is divided into four series: 1. correspondence; 2. newspaper clippings; 3. photographs; and 4. memorabilia.

Correspondence includes two letters written by Dr. J. Morgan Wells, Jr. to “Debb” one sent while onboard SeaLab II in 1965 and one while on Tektite II in 1970. Newspaper clippings include an article about the capture of “Gravel Gertie”, a gray whale, by an expedition from Scripps Institution of Oceanography in 1965 and an article about the five aquanauts, which included Morgan Wells, returning from a month-long training program in Florida in preparation for an undersea experiment on the US Navy’s SeaLab II in 1965. Most of the photographs are of Dr. Wells, his family and friends with one a copy of the team from the National Geographic article onboard Tektite II. The memorabilia series includes a matchbook cover from the U.S. Naval Training Center in San Diego, California.

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Series Descriptions

Series 1: Correspondence 3 items 1965, 1970

This series contains two letters (ALS) from Morgan Wells to Debb Finseth. The first was written while under the ocean on SeaLab II (1965) and the second was written while onboard Tektite II (1970) on the bottom of the ocean. Both letters describe life as an aquanaut while living on the ocean floor. The first letter is undated, the second, along with its envelope, is dated August 30, 1970. The envelope carries a postmark along with the text: *Dispatched from the ocean floor.*

Series 2: Newspaper Clippings 2 items 1965

The newspaper clippings included in this collection are from 1965. One article describes the capture of "Gravel Gertie," a gray whale. The second article is a report of Wells and his fellow aquanauts as they return to San Diego from training in Florida.

Series 3: Photographs 6 items c.1970s

Five color photographs of Wells, his parents, "Barry's daughters," and an unidentified girl, [Debb Finseth?]. These photos are undated. A copy of "Mission 10 teammates" from the *National Geographic* article, Aug 1971 which includes Wells with his teammates.

Series 4: Memorabilia 1 item n.d.

Only one item is included: a matchbook cover from the Commissioned Officers' Mess at the U.S. Naval Training Center. San Diego, CA.

INVENTORY

Box 1

Folder:

1. Finding Aid
2. Bibliography
3. Support Materials (2 folders)

Series 1: Correspondence

4. From: Morgan Wells to Debbie [ALS, 1p.] n.d. [1965]
5. From: Morgan Wells to Debbie, Donna & Family [ALS, 1p.] 1970 Aug 30
- From: Morgan Wells to Debb Finseth (envelope) 1970 Aug 30
Dispatched from the ocean floor
Postmark: TEKTITE 2 – Great Lameshur Bay – St. John [V.I.]

Series 2: Newspaper Clippings

6. Evans, Bryant. "Captive Whale Meets Press." The San Diego Union. Feb. 27, 1965
7. "5 San Diegans Back Home After Training As Aquanauts." n.l., n.d.

Series 3: Photographs

8. "Mission 10 teammates." *National Geographic*. Aug. 1971, pp. 265-296. 1971 Aug
9. Morgan Wells and unidentified girl [Debb Finseth?]. color. 2.5 x 2.5" n.d.
- Morgan Wells and unidentified girl [Debb Finseth?]. color. 2.5 x 2.75" n.d.
- Morgan Wells and unidentified girl [Debb Finseth?]. color. 3 x 2.75" n.d.
- John & Evelyn Wells. color. 2.5 x 2" n.d.
- Barry's daughters. color. 2 x 1.25" n.d.

Series 4: Memorabilia

10. Match book cover: *Admiral Kidd*. Commissioned Officers' Mess.
U.S. Naval Training Center. San Diego, California. n.d.