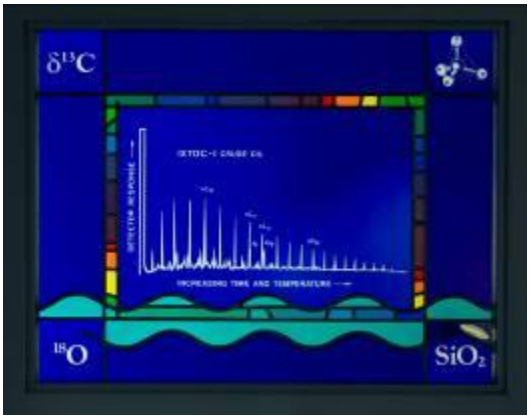
HIDDEN TREASURES ENCOMPASS COLLEGE OF MARINE SCIENCE HISTORY AND COMMUNITY

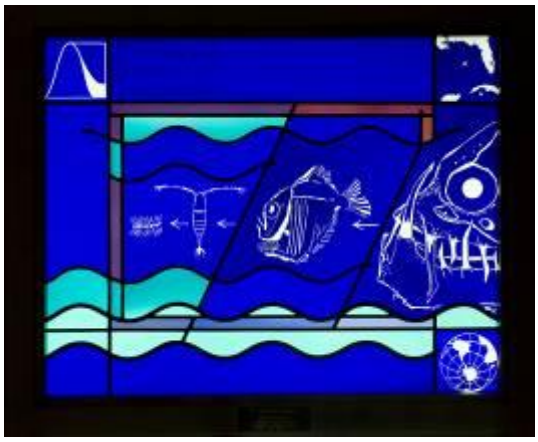
By Danielle Greenhow, current CMS graduate student

On the third floor of the Knight Oceanographic Research Center, in the lobby of the Dean's office, six stained glass windows glisten when daylight shines through. These decorated windows display everything from food webs to life cycles, and commemorate the research and efforts that six retired faculty dedicated to the College of Marine Science and our community.

Beginning in 1997 these stained glass windows were constructed by Lenn Neff, of Contemporary Leaded Glass & Architectural Arts, after the idea was presented by Dr. Peter R. Betzer to honor Professor William H. Sackett. "A stained glass window seemed like an especially distinctive way to commemorate his career," Betzer recalls. Neff has over 35 years in experience with architectural glass design and has created residential and commercial pieces throughout Florida, as well as in Fiji and Saudi Arabia. With the help of Neff, five other windows were constructed in the last decade to honor the distinguished, retired faculty members Dr. Thomas L. Hopkins, Dr. Peter R. Betzer, Dr. Norman J. Blake, Dr. Kendall L. Carder, and Dr. Gabriel L. Vargo.



Dr. William H. Sackett joined the then department of marine science at the University of South Florida in 1979 and was department chair for his first three years on the faculty. In 1982 he focused on his research and teaching, and gained the title of Distinguished Research Professor. His endeavors in marine science ranged from stable isotopes to hydrological cycles, while also guiding three Master's students and three doctorate students to their degrees. He became a Richard Montgomery Field Fellow in the American Geophysical Union and left behind a legacy of education, outreach and dedication. After producing over 100 publications, Sackett passed away in 2003 from complications of leukemia. The window in his honor depicts an isotope spectrogram as well as references to his amorphous silica and biogeochemical work.



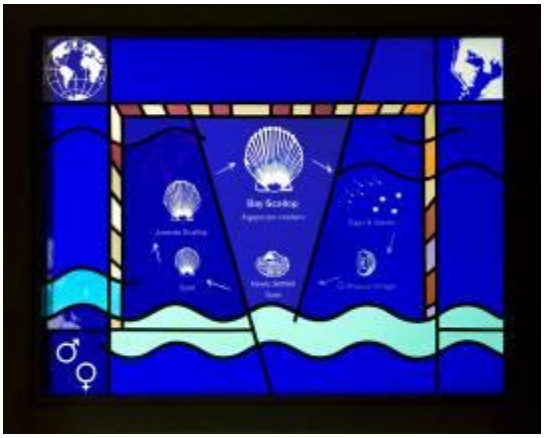
Just two years later, **Dr. Thomas L. Hopkins** retired after 32 years at the College of Marine Science (CMS). As he was the last of three original faculty members who began with the department in 1967, Betzer thought it again fitting to have a window as a tribute to his hard work. Research for Hopkins took him to the deep sea and the Antarctic. In 1969 he helped start the deep sea biology program and began investigating deep sea fauna including lantern fishes, shrimp and cephalopods. Over a decade later, he began working with Dr. Jose Torres, a current CMS faculty member, on Antarctic ecology and most notably the development of the trophic structure of an entire midwater fish assemblage.

The trophic interactions at his study sites that were central to Hopkins' research are central to the window in his honor. The Center for Ocean Technology logo at the top of his window symbolizes his collaborative work with the center to develop technologies for his research. "I am still in contact with CMS-COT regarding the development of marine sensors (e.g. SIPPER)," Hopkins said.

Several of the retired faculty members that the windows pay tribute to are still an integral part of the CMS community. This is best reflected in the efforts of **Dr. Peter R. Betzer**. Betzer began teaching in 1971 and shortly after began developing many facets of the current face of the College of Marine Science. His personal research looked into the role of particles in oceanic biogeochemical cycles. His impressive 36 year career never went unrecognized as he received a Distinguished Authorship Award from the Department of Commerce for his work on the role of biologically synthesized calcium carbonate on marine carbonate chemistry and later a cover of *Nature* on the effect of windborne continental dust on ocean productivity.

However, his personal accolades were not the essence of what he truly set out to accomplish. In the late 70's he began fighting for a stand-alone Ph.D. program within the College of Marine Science that came to fruition in 1982, with Bruce Barber becoming the first CMS Ph.D. student. Betzer became the chair of the Department of Marine Science in 1983 and the milestones he brought to the department and later college are far reaching indeed. His dedication and efforts resulted in the recruitment of the United States Geological Survey (USGS) to St. Petersburg and the creation of the Pier Aquarium in 1988. He can also be credited with acquiring funding for PORTS and COMPS, two physical oceanography systems, which opened in 1994. In Betzer's opinion, "I think that my greatest accomplishment is the $18 million endowment that supports a host of important programs in the College of Marine Science. It is especially satisfying to know that during my tenure, 224 marine science graduates have been supported by our endowed fellowships."

In fact, over $10 million has come from endowments raised by Betzer in the last 25 years and the other $8 million supports the Oceanography Camp for Girls and the Eminent Scholar Lecture Series. Most recently was his development and encouragement of the Center for Ocean Technology, which attracted SRI in 2006. Interacting with not only the marine science community but also the graduate student body, he is responsible for graduating 5 Master's graduates' and 1 Ph.D. graduate Betzer's window shows the many organizations that he helped build or attract to CMS during his career, as well as the organisms that began his path in marine science.

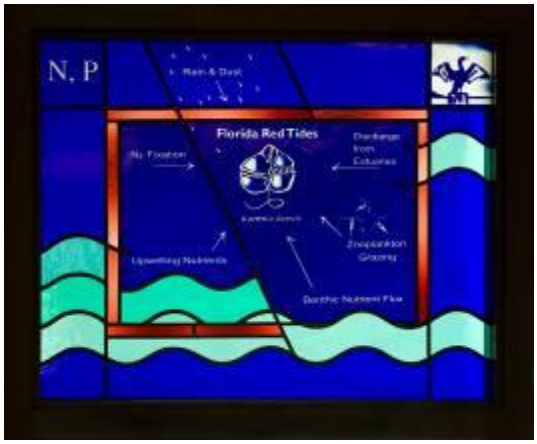


Dr. Norman J. Blake began as an Assistant Professor in 1972, becoming an Associate Professor and eventually a full Professor in 1983. His research centered on marine and pollution ecology. He became very active in bivalve aquaculture and the public health of marine shellfish. Blake was a strong advocate for conservation and enhancement of the bay scallop population along the west coast of Florida. He has directed 21 Master's students and 8 Ph.D. students. "The window represents a depiction of not only me but also the work of my graduate students throughout my tenure at the college," Blake highlighted.

Working actively with the wider marine science community, Blake was a founding member of the Board of Directors of the St. Pete Pier Aquarium and was co-chair for the 14th International Pectinid Workshop in St. Petersburg. He also was on the editorial board of the Journal of Shellfish Research and maintains the only shellfish hatchery in Florida dedicated to the bay scallop. The bay scallop reproductive ecology illustrated on Blake's stained glass window has been his research for many years.

Focusing more on measuring marine environment properties rather than any specific organism, **Dr. Kendall L. Carder** joined the Department of Marine Science in 1969. He began research into the little explored field of remote sensing developing remote optical sensors and analyzing satellite imagery data. Carder became a leading expert on using various analytical tools to convert a raw satellite image into useful data such as chlorophyll concentration, as well as developing methods to detect the presence of red tide organisms. He delved into other projects, including quantifying the marine light field and the effects of dissolved organic matter and bottom sediments, and applying optical methods to increase national homeland and port security. Carder played a major role in larger remote sensing projects, becoming the first program manager at NASA for the Global Productivity Program and developing the Moderate Resolution Imaging Spectrometer (MODIS) in the 1980's. He has reached out to serve on over 50 committees or boards, both nationally and abroad, as well as mentoring 15 Master's students and 10 Ph.D. students.

Carder's stained glass window reflects the expanse of development he had a hand in bringing to the remote sensing field. "I am extremely honored…No greater gift could have been provided," Carder remarked. His gifts to the field depicted in the window include MODIS, a rainbow representing the spectral importance of the collected data, and other remote sensors including those deployed on an autonomous underwater vehicle (AUV). He is currently finishing work on projects entitled, "Active Camouflage of Underwater Assets," "Trans-Interface Optical Communication," and "Impact of Light Quality on Sea Grass Beds in Tampa Bay."



The final window belongs to **Dr. Gabriel A. Vargo**. A premiere phytoplankton biologist, Vargo spent 27 years with CMS before retiring. He has spent many of those years studying phytoplankton growth, as well as focusing on the red tide dinoflagellate *Karenia brevis*. He led ECOHAB, a project in collaboration with FWRI on harmful algal bloom research, for five years and was in charge of the first-year Biological Oceanography course for 20 years. Vargo later extended his interest in harmful algal blooms to encompass his passion for birds by working with Tufts veterinary medical school to look at marine toxins in the bodies of shore birds. After serving on more than 90 Master's and Ph.D. committees, he is currently a Professor Emeritus with the college and working on continuing his SEANET program. The images in Vargo's window illustrate nutrient dynamics, *Karenia brevis* influences and his work with sea and shore birds.

The images and messages that these windows collectively portray are worth far more than their cost. They reflect the hard work, dedication and passion of retired faculty and graduate students and their collaborating scientists. Most importantly to the faculty they honor, they are reminders of the relationships they had with colleagues and students. Blake commented that his greatest accomplishment was the, "witnessing of maturing graduate students and their development into scientific researchers." The other retired faculty strongly feel the same way. Vargo considered, "being a mentor to quite a few students and knowing I added something to their lives," his biggest contribution.

Those relationships and the unique qualities about the College of Marine Science community are what build defining discoveries and moments in science. "…The genuine pride our group has in scientific advancements, whether theirs or a colleagues, is especially distinctive about our college; may this positive 'espirit de corps' persist," Betzer declared. It's with that outlook and influence that these windows, and in turn the College of Marine Science, can perpetuate growth within itself and throughout the community.

"The curiosity engendered by each of the windows and the variety of images portrayed is a powerful message to potential students and donors regarding the breadth and depth of subjects taught and researched by our retired faculty. Imagine how much more impressive would be a collection of windows that included our remaining faculty," Carder said. As this collection of tributes continues to expand, its presence and power will be even more compelling and worthy of admiration.