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History of the Center for Coastal Studies, Texas A&M University–Corpus Christi

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Introduction

The Center for Coastal Studies (CCS) is a research center within the College of Science and Technology on the campus of Texas A&M University–Corpus Christi (TAMU-CC). It is located within the Natural Resources Center, a multipurpose research and services facility on Ward Island between Corpus Christi and Oso bays in Nueces County, TX. CCS was founded by Drs. Steve Barnes, Brian Chapman, and me in September 1984 as TAMU-CC's first scientific research center. The original mission of CCS was to provide an administrative unit within the College of Science and Technology to manage coastal and marine ecosystem research and contract work for faculty and graduate students. The geographic region of focus was primarily the Texas Coastal Bend (Fig. 1), Padre Island, and the Laguna Madre, but it also included the entire Texas coast and the broader Gulf of Mexico.

From the beginning, researchers always invited graduate students to participate in their research projects, recognizing that hands-on research experience would serve graduates best in their future careers or further graduate studies. Hands-on fieldwork experience and opportunities for graduate students (and later for undergraduate students) became a hallmark of CCS research. Early studies during the 1980s primarily involved coastal ecological studies and water quality monitoring conducted for state and federal agencies in the region and on campus.

CCS did not receive university or state support funding during its first 8 yr of operation—other than an initial $4,000 start-up grant from university President Dr. B. Alan Sugg, 1/4–release-time for me to serve as its Director, and a fraction of one secretary's time (Fran Treviño). CCS maintained an office in the Center for Sciences 1 d per week during the first 6 yr and 1.5–2 d per week when it was moved to the Old Science Building (renamed the Center for Environmental Studies and Services) in January 1990.

In FY 1992, the State of Texas recognized CCS and awarded Special Item Funding for the first time. Although $200,000 per year of the biennium was approved, only $150,000 and $179,000, respectively, were received annually during the first 2 yr. Additional staff, including an Associate Director (Dr. Quenton Dokken), a full-time Secretary (Gloria Krause), and a part-time Business Coordinator (Jeff Foster), were added at this time. All were housed in the Center for Environmental Studies and Services (CESS), where CCS cooperated and collaborated with state and federal natural resource agencies that fully occupied the facility by July 1990.

Simultaneous with the first state funding for CCS, the Texas legislature allocated $10 million to build a new 100,000–square foot CESS building on the west side of campus; this came about as a result of the successful cooperation and collaboration of CCS with other agencies dealing with the Texas coast on environmental issues. When it opened in June 1996, the new facility, renamed the Natural Resources Center (NRC), housed 19 different State of Texas, TAMU-CC, and Texas A&M University System entities dealing with coastal and environmental issues.

Research and operations history.—The first full-time Research Scientist hired at CCS (Dr. Roy Lehman) started in 1993, but when he accepted a faculty position the following year, Drs. Liz Smith (1994) and Kim Withers (1995) each accepted 9-mo positions at 1/2-time to help ''launch'' CCS into full-time activity. Both Smith and Withers had received degrees at TAMU-CC and were strong believers in the hands-on, field-oriented model. A full-time business coordinator (Dawn Bennett) and a full-time Operations Manager (Brien Nicolau) were also added to the CCS staff when the new NRC building opened. In addition, a cooperative agreement was established to house the Corpus Christi Ecotoxicology Field Station of the U.S. Geological Survey (USGS; previously occupying part of the old CESS building) within CCS facilities in the NRC. This latter arrangement added one additional ''soft money'' CCS Research Scientist position (filled by Dr. Marion Nipper) in collaboration with the USGS.

Research focus areas flourished along the lines of the five research scientists (including the Director and Associate Director) and one Research Associate (the Operations Manager, Nicolau) in CCS and included coastal and coral

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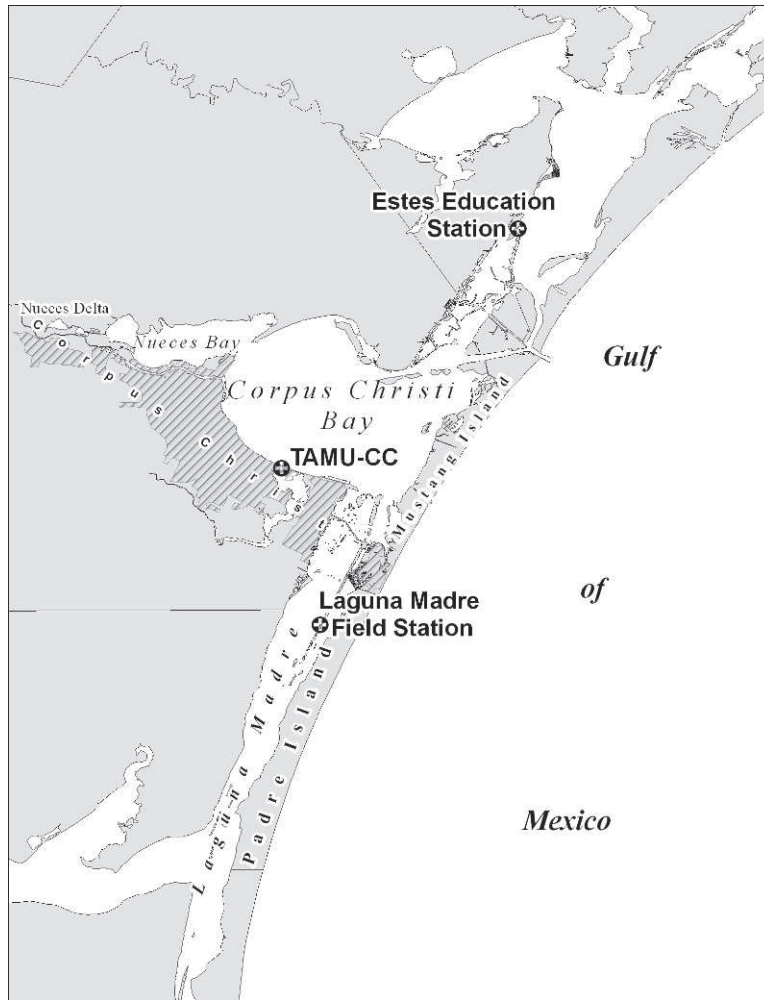

Fig. 1. Map of the Texas Coastal Bend, primary geographic focus area for CCS research.

reef ecology, molluscan studies, artificial reef ecology, wetlands ecology, conservation science/Geographic Information System (GIS), benthic ecology, shorebird ecology, water and sediment quality monitoring, and marine ecotoxicology. Two Physical and Life Sciences Department (now the Department of Life Sciences) faculty members (Drs. Roy Lehman and Joanna Mott) consistently used CCS to manage their grants as research associates in the study areas of estuarine and marine microbiology, bacterial source tracking, antibiotic resistance, and pulse field gel electrophoresis. Several other College of Science and Technology faculty (Drs. Grady Price-Blount, Stacey Lyle, David McKee, and Robert Benson) used CCS for some of their grants and contracts.

The gift endowment of the Harte Research Institute (HRI) for Gulf of Mexico Studies was given to TAMU-CC in September 2000, and my subsequent joint appointment as Associate Director of HRI significantly affected the management and research efforts/production of CCS during FY 2002 through 2005. In addition, two CCS research scientists (Smith and Dokken) had increasing administrative duties during this time, thereby decreasing their research activity. This circumstance required a temporary involvement of CCS staff while HRI was being planned and developed. Dr. David Hicks joined CCS as Research Scientist during FY 2002–03, assisting me with teaching and research as well as developing a research program in invertebrate physiological ecology. Erin (Albert) Hill and Alex Nuñez, TAMU-CC M.S. graduates, were hired as research specialists during this time frame to assist with the Nueces Delta Monitoring/Allison Wastewater Diversion projects and

Fig. 2. Benthic sampling in Nueces Delta, a long-term study area for CCS research (Photo by Brien Nicolau).

Regional Coastal Assessment Program, respectively (Fig. 2). Numerous other graduates, including Susan Childs, Suzanne Bates, Carl Beaver, and Leslie Smith, initiated their scientific careers working at CCS.

HRI was temporarily ''housed'' within the CCS facilities from September 2001 to November 2005 while the institute concept was being developed and the HRI building was being constructed.

Campus history.—TAMU-CC started on the 243-acre Ward Island campus in 1947 as the University of Corpus Christi. This small liberal arts university, a part of the Southern Baptist Convention, was born after World War II with the sale of the island for $1 (as the story goes) to start the new university at the no-longer-needed radar training station. The young school was operated out of the old naval facilities for years with some new buildings added over time.

In 1970, Hurricane Celia almost completely destroyed the island's infrastructure, and, since it had already been damaged by previous hurricanes (Carla in 1962 and Beulah in 1967), the Baptists decided to give it up, and the State of Texas took it over. The new state institution, Texas A&I University at Corpus Christi, became a part of the University System of South Texas and began as an upper-level (junior, senior, and graduate only) university in 1973. As a result of the name confusion associated with the long-standing Texas A&I University at Kingsville, the Corpus Christi campus changed its name to Corpus Christi State University in 1977. Both campuses became a part of the Texas A&M University System in 1989, and the Texas A&M University–Corpus Christi name was adopted in 1993. TAMU-CC then became a 4-yr, comprehensive university in 1994. With the name change; a new, development-minded president (Dr. Robert Furgason); and its 4-yr status, TAMU-CC began a dramatic, explosive growth phase, growing from 3,000 students in 1990 to 9,600 students in 2010. In addition, research increased from $500,000 in 1990 to over $20 million in 2010. The campus infrastructure grew with the infusion of over $300 million during this time frame.

Marine Science History

Marine science was first introduced to the campus in 1957, when Dr. Henry H. Hildebrand

started teaching at the University of Corpus Christi. Dr. Hildebrand had recently received his Ph.D. from the new University of Texas Marine Science Institute in Port Aransas, under the advisement of Dr. Gordon Gunter.

Dr. Hildebrand was a firm believer in hands-on, field-oriented marine science, so his students were frequently to be found on field trips around the Texas Coastal Bend—primarily Corpus Christi Bay, the Laguna Madre, and Mustang and Padre Islands. He also started taking students on extended field trips to Belize and its offshore coral reefs.

The CCS embraced this research and teaching philosophy, almost always taking on field-oriented research and contract work. The following list summarizes the history of marine science study at TAMU-CC during the past several decades:

1957 Dr. Henry Hildebrand starts the Marine Science Program
1967 The USGS Office of Marine Geology moves to campus
1970 Hurricane Celia severely damages campus facilities
1973 Dr. Hildebrand moves to Texas A&I University at Kingsville
1974 Dr. Wes Tunnell joins the program and continues to develop the marine science program
1975 M.S. Degree in Biology with coastal and marine emphasis is offered for the first time
1978 New science building built/moved into (Center for Sciences)
1978 The USGS expands into the Old Science Building
1984 The CCS is created
Mid- to late 1980s State and federal agencies move into Old Science Building, which is renamed the CESS)
1987 Conrad Blucher Institute for Surveying and Science endowed and begun
1988 Mariculture M.S. degree offered for the first time
1989 Texas Coastal Ocean Observation Network begun
University becomes part of Texas A&M University System
1992 Environmental Science B.S. and M.S. degrees offered, with coastal and marine emphasis possible
1996 NRC opens with state agencies (focused on Texas coast) and university research centers
2000 HRI for Gulf of Mexico Studies endowment announced ($46 million)
2005 Coastal and Marine System Science Ph.D. program begun
2005 HRI building ($18 million) opened
2008 Marine Biology Ph.D. program begun

Natural Resources Center

The co-location of state and federal agencies on the Ward Island campus began in the late 1960s when the USGS Office of Marine Geology moved into a building on the western side of campus built specifically for it. This very active office/lab continued to increase its research activity in the Gulf of Mexico and Caribbean Sea, outgrowing the space in the late 1970s. When we (the sciences) moved out of the Old Science Building, left over from the UCC days, the USGS asked then-President Alan Sugg if they could have part of the Old Science Building for expansion of their programs. His first response was ''no,'' because the building was unsound, needed much repair, and wasn't fit for occupancy. However, after much begging and pleading, President Sugg gave in and said ''yes.'' He offered it to them rent-free on the condition they would need to pay for custodial fees, utilities, and any building modifications. Soon, word got out about the rent-free status of the old building, and the U.S. Fish and Wildlife Service (USFWS)–Ecological Services office moved in during 1982, just before we created the CCS.

I then began promoting the old building as a good place to be for synergistic work with other agencies, researchers, and student interns. By the late 1980s, the old science building was full of state and federal agencies: USFWS–Ecological Services; USFWS–Fisheries Resources Office; USFWS–National Wetlands Research Center, Corpus Christi Field Station; USFWS– National Fisheries Contaminant Research Center; Minerals Management Service; and Texas Parks and Wildlife's Resource Protection Division. Because of the win–win success offered by this co-location concept, we renamed the building the CESS, and I wrote a prospectus for a new building. This new facility was to be a multi-agency center for applied environmental studies, research, and services within mainland, coastal, and offshore South Texas.

Fortunately, State Senator Carlos Truan, who had always been a proponent of environmental issues, worked with TAMU-CC's new president, Bob Furgason, to write a bill during the 1991 legislative session to fund a new, $10 million, 100,000–square foot building. Unfortunately, as a result of state law, the new building had to comprise 95% state entities, leaving out all but one federal unit from the new building; this

Fig. 3. Carlos F. Truan NRC on the TAMU-CC campus: (a) artist's rendering and (b) aerial view to the southeast of the Ward Island campus between Corpus Christi Bay (left) and Oso Bay (background) showing the NRC building that houses the CCS and the HRI for Gulf of Mexico Studies (Photos courtesy of TAMU-CC).

unit, the USFWS–Environmental Contaminants group, formed a cooperative agreement with the CCS and so was able to move into the new building in summer 1996. Other federal entities remained in the old CESS building.

The new building was called the NRC. In 2003, the building was renamed the Carlos F. Truan NRC in honor of the senator who wrote the enabling legislation. The building is a State of Texas building, managed and operated by the university (Fig. 3).

The new NRC building added other state agencies, including the Texas Commission on Environmental Quality, the Texas General Land Office (three different division offices), the Texas Health Department's Shellfish Sanitation Division, and the Texas Forest Service. An office of the Texas Sea Grant Program was also housed

in the building. University research centers included the CCS, the Center for Water Supply Studies, the Center for Bioacoustics, and the Division of Nearshore Research of the Conrad Blucher Institute for Surveying and Science. The latter group operates the Texas Coastal Ocean Observation Network, the densest system of tide gauges in world, extending the length of the Texas coastline from Louisiana to Mexico. Other environmental parameters have been added to selected gauges (temperature, salinity, oxygen, currents, etc.) since the network was initiated in 1989. All data are telemetered to the campus via radio waves, cell phones, and satellites to provide near–real-time data on the Internet (http://lighthouse.tamucc.edu/Main/HomePage).

Local businesses needing permit information and applications referred to the co-location concept as ''one-stop-shopping'' in terms of gathering permit information or having agency meetings. The University benefited from the arrangement by obtaining research and contract work to answer questions to real-world environmental problems, and students gained agency experience as interns or got jobs after graduation. It was a true win–win operation for the community, the university, the students, and the agencies.

New CCS Mission

With new State of Texas funding and the opportunity for new facilities in the new NRC building, CCS revisited its mission statement in the early 1990s and came up with a new one for the growing center. The current mission of the CCS is ''to increase knowledge and understanding of the marine ecosystems, habitats, flora, fauna, and socioeconomics of the Texas coast and Gulf of Mexico through education and research.'' As an interdisciplinary marine research institute within the College of Science and Technology, the CCS conducts basic and applied research, ecological monitoring, public education outreach, and graduate-level education and research programs. Today, the primary goals and objectives of the CCS are

- to conduct relevant research on Texas coastal issues, particularly in the Texas Coastal Bend and South Texas;
- to train, advise, and mentor TAMU-CC graduate students for further graduate education or as coastal and marine science managers for state and federal agencies, as well as industry;
- to provide hands-on undergraduate and graduate research assistantships and experiences in coastal and marine science;
- to disseminate research results and other activities to the scientific community and general public through press releases, websites, peer-reviewed publications, technical reports, and presentations in regional, national, and international meetings; and
- to provide coastal and marine education outreach programs.

Research Programs

As with any marine research lab, CCS's research programs flourished in the areas of interest of our lead researchers: Quenton Dokken, Brien Nicolau, Marion Nipper, Liz Smith, Wes Tunnell, and Kim Withers.

Quenton Dokken was hired as Associate Director and Research Scientist in 1991. His research interests include fisheries, artificial and coral reefs, Gulf of Mexico sustainability and management, and regional socioeconomics. He developed the University's Scientific Diving Program and wrote its policy manual in 1995 and had an active offshore diving program on oil and gas platforms and at the Flower Gardens National Marine Sanctuary (Fig. 4). Quenton left the university in 2006 to become Executive Director of the Gulf of Mexico Foundation.

Brien Nicolau became Operations Manager and Research Associate at CCS in 1996. His research interests include wetland ecology, marine/estuarine benthic ecology, water resource issues, and environmental and marine conservation. Brien developed several large, long-term environmental monitoring programs in the Nueces River Delta for agencies and the City of Corpus Christi regarding the impacts of freshwater inflows; other programs in the Texas Coastal Bend involved evaluating water and sediment quality. The latter were funded by the Coastal Bend Bays and Estuaries Program, the Texas Commission on Environmental Quality, and the Environmental Protection Agency.

Liz Smith became Research Scientist at CCS in 1994. Her research interests include coastal ecology (wetland, barrier islands, and riparian systems), coastal resource management, habitat conservation planning, restoration and enhancement, and GIS applications for resource management. Liz works closely with natural resource management agencies on campus and worked extensively on the characterization phase of the Corpus Christi Bay National Estuary Program (now the Coastal Bend Bays and Estuaries Program). Her most recent work involves spatial work within coastal habitats and the use of video imaging for conservation purposes.

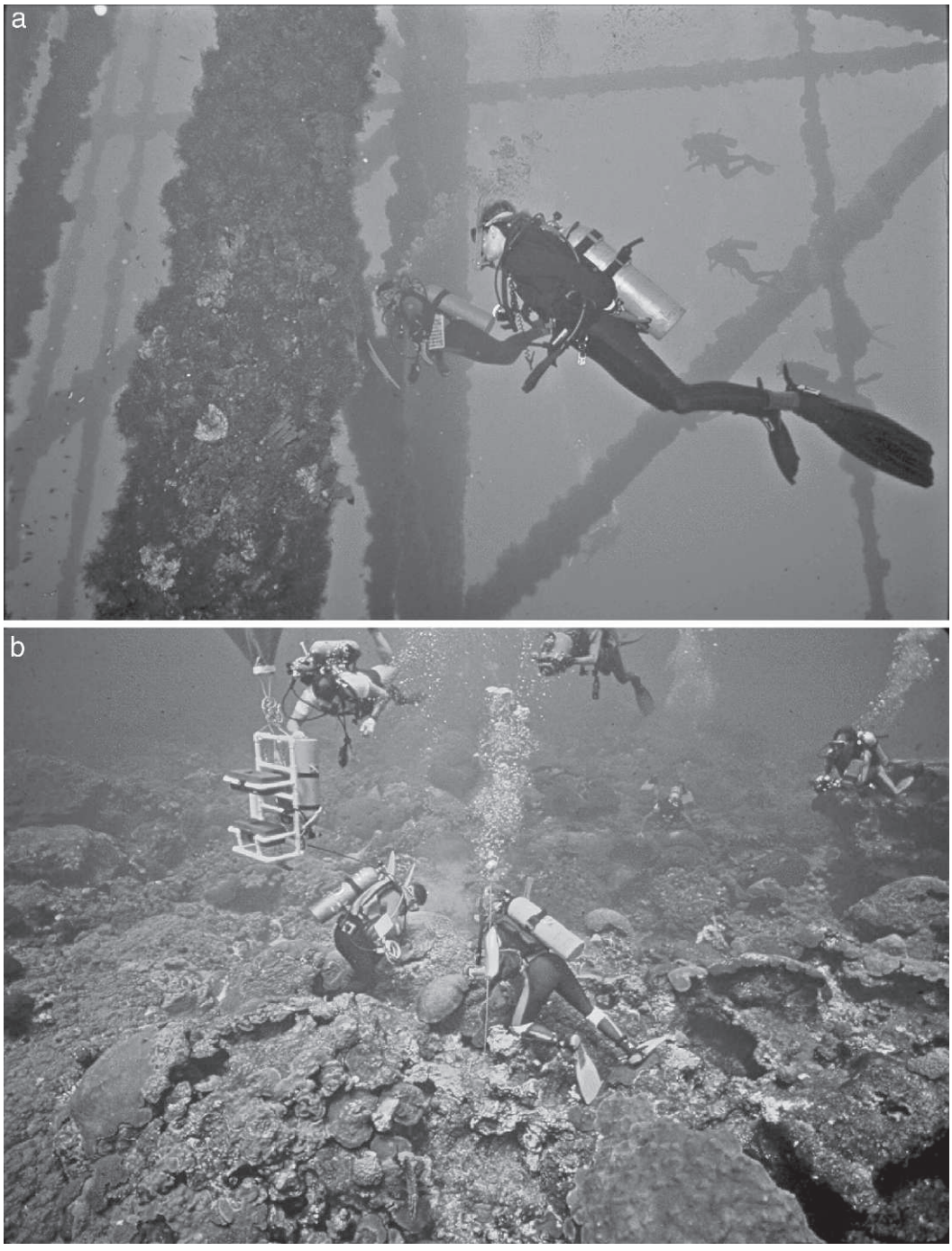

Fig. 4. CCS offshore work focused on oil and gas platforms as artificial reefs (a) and the Flower Garden National Marine Sanctuary (b) (Photos by Quenton Dokken).

Marion Nipper joined CCS in 1997 as Senior Research Scientist. Her research interests include the development and application of toxicity tests with marine organisms, with the objective of understanding the effects of anthropogenic contaminants in marine ecosystems. Her work is often conducted in collaboration with Scott Carr under our cooperative agreement with the USGS Marine Ecotoxicology Research Station (Fig. 5). Together they have studied the

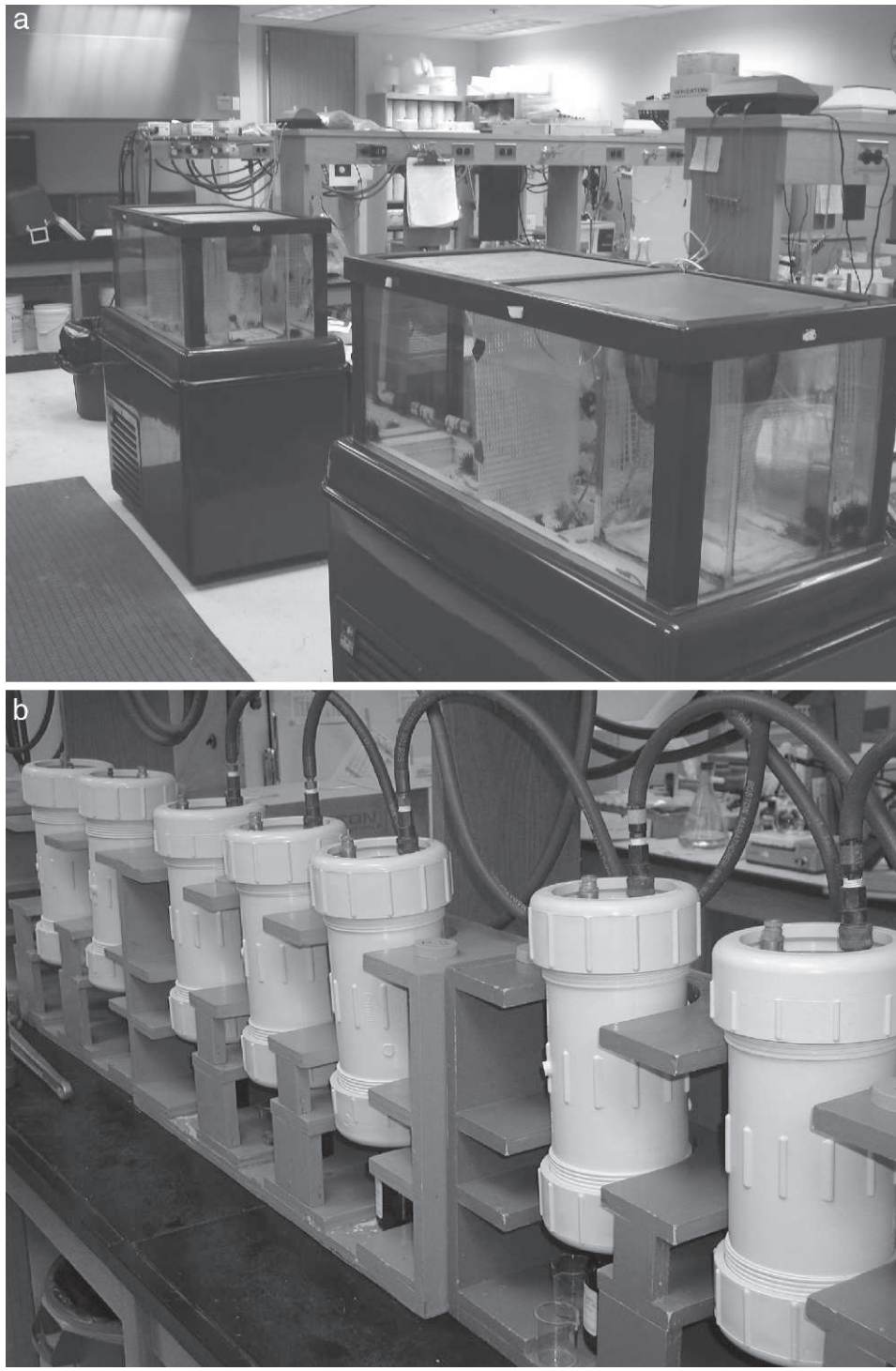

Fig. 5. Views of Ecotoxicology Laboratory utilized in Cooperative Agreement between CCS and USGS: (a) sea urchin maintenance tanks and (b) pneumatic porewater extraction devices (Photos by Marion Nipper).

impacts of military and port facilities around the world on the marine environment. Most recently, Marion has been conducting research on the effects of African dust on Caribbean coral reefs. She is managing editor of GulfBase (www.gulfbase.org) and co-editor with Kim Withers on the English translation of a 38-chapter book on environmental issues of the Gulf of Mexico (Withers and Nipper, 2008), first published in Spanish (Caso et al., 2004).

My own research has focused on coastal and coral reef ecology; systematics, distribution, and ecology of molluscs; oil spill impacts on coastal and marine habitats; and invasive molluscan species. Most recently, I have focused on a Gulf of Mexico biodiversity inventory with the HRI for Gulf of Mexico Studies at TAMU-CC and over 140 colleagues from around the Gulf in the United States, Mexico, and Cuba (Tunnell, 2005; Felder and Camp, 2009). I worked with all CCS scientists in summarizing the living resources of the Corpus Christi Bay National Estuary Program (Tunnell et al., 1996) and, similarly, summarized all available information with Liz Smith and Kim Withers on the Laguna Madre in *Laguna Madre of Texas and Tamaulipas* (Tunnell and Judd, 2002). Most recently, I produced *Coral Reefs of the Southern Gulf of Mexico* with colleagues from Mexico and the United States (Tunnell et al., 2007). A third book, *Encyclopedia of Texas Seashells*, was published in 2010 in collaboration with Jean Andrews, Noe Barrera, Fabio Moretzsohn, Kim Withers, and David Hicks (Tunnell et al., 2010).

Kim Withers joined CCS as Research Scientist in 1995. Her recent research interests include intertidal and subtidal habitats of the western Gulf of Mexico and the Mexican Caribbean. Areas of research experience and interest include invertebrate communities of subtropical and tropical estuarine habitats, coral reefs and offshore oil platforms, shorebird ecology, and juvenile fish communities of seagrass and mangroves. Kim is the technical editor for CCS and has worked in this capacity on several major projects. Most recently, she completed editing responsibility on a 38-chapter book on environmental issues of the Gulf of Mexico (Withers and Nipper, 2008).

Two professors in the Department of Life Sciences in the College of Science and Technology are active research associates, either using lab space or facilitating grant management of CCS: Roy Lehman and Joanna Mott. Roy's research interests include the distribution and ecology of seaweed communities, coral reefs of the southwestern Gulf of Mexico and the Yucatan Peninsula, systematics and molecular botany of green algae, and water quality studies of non–point source pollution. He recently published a book on the vascular plants of South Texas (Lehman et al., 2005).

Joanna Mott's research interests include environmental/public health microbiology, microbial aspects of surface water quality (marine and freshwater), bacteria source-tracking techniques, *Vibrio* ecology in coastal waters, bioremediation, and microbe–plant interactions. Joanna is currently Chair of the Department of Life Sciences.

The CCS has maintained two lists of publications since the late 1980s: Technical Reports (contract reports) and Contributions (published works in journals, proceedings, and books). As of 2010, there are over 125 citations on the Technical Report list and over 130 on the Contributions list (see www.sci.tamucc.edu/ccs/publications/html for all listings).

Education–Outreach Program

The CCS Education–Outreach Program began in 1991, when graduate student Nivra Kelley developed the Adopt-A-Wetland Program (AAWP) under a USFWS–Ecological Services contract involving wetlands restoration, creation, and enhancement (Kelley, 1996). The AAWP was an educational program for kindergarten through 12th grade students patterned after the Adopt-A-Highway Program, but with an educational component. Any school group, scout group, or youth group could adopt a wetland and then learn about wetland biota, water and soil chemistry and monitoring, and surveying. The goal of the AAWP was to promote wetland conservation through hands-on interactive education programs. Nivra developed this program with training courses for teachers around the State of Texas (and sometimes in adjoining states) and northern Mexico (Kelley and Ford, 1993a,b). Under her direction (1991–97) the program received funding from the USFWS, Environmental Protection Agency–Gulf of Mexico Program, and Texas Parks and Wildlife. During the first 5 yr of the program, over 450 teachers were trained, and some 150,000 students experienced or monitored a wetland. Ron Smith continued the AAWP program for several years after Nivra moved out of state for another opportunity, and Jay Tarkington took over the program in 2000. After 8 yr of public school teaching, Jay knew how to motivate students, and he expanded the education–outreach program with a number of other programs. He subsequently renamed the education–outreach/AAWP Program the Aquatic Education Program to encompass a new variety of opportunities: Wonders of Wetlands, Walk through the Wetlands (a portable wetland), summer camps,

Fig. 6. CCS Aquatic Education Program in action: (a) shallow draft, floating classroom, tour boat, the *Wetlands* Explorer and (b) hands-on education in the salt marsh (Photos courtesy of Jay Tarkington).

Teaching Environmental Science, Wetland on Wheels (a trailer), SCUBA Guy, Wetlands Explorer (a tour boat), Estes Education Station (see Fig. 1), and Eco-Historic Tours. Jay's highly interactive programs engage people from K-gray (Kindergarden – elderly) in all sorts of venues—from classrooms to field trips to weekend festivals—around the Texas Coastal Bend (Fig. 6).

Other Programs

In addition to the above regularly funded research and education programs, the CCS has developed several ''value-added'' programs that benefit the University, the students, and the community: a scholarship program, coral reef ecology field trip and research program, a scientific diving program, the Laguna Madre Field Station, the National Ocean Science Bowl, and the Gulf Coast Studies book series:

1. CCS Scholarship Program—The CCSs started its student scholarship program in 1984 with the David May Memorial Scholarship. Since that time, the program has grown to include seven scholarships:
   - David May Memorial Scholarship—for assisting students with coral reef research and educational experience;
   - Millicent Quammen Memorial Scholarship—an endowed scholarship for coastal, marine, or environmental students to attend scientific meetings, go on field trips or take advantage of other beneficial opportunities, or purchase research equipment;
   - Caribbean Connection Fund/Scholarship—set up by Drs. Harley Moody and Wes Tunnell to assist students with funds to go on the annual coral reef ecology field trip to Mexico;
   - Karen Koester Dodson Memorial Scholarship—an endowed scholarship to assist students with funding for the coral reef ecology class field trip and associated research;
   - Henry Hildebrand Endowed Scholarship—an endowed scholarship set up in memory of Dr. Henry Hildebrand, for graduate students doing research in coastal and marine environments;
   - Hans and Patricia Suter Endowment—an endowed scholarship established to assist graduate students doing research on environmental issues; and
   - Carl R. Beaver Memorial Scholarship—an endowed scholarship to assist students conducting research on coral reefs that will lead to conservation.
2. Coral Reef Ecology Class Field Trip and Research Program—The Coral Reef Ecology Class and Field Trip Program was started at TAMU-CC in 1976 with the first class and field trip to the reefs of Veracruz, Mexico (Fig. 7). After 20 yr of study on the Veracruz reefs, we switched to the Sian Káan Biosphere Reserve on the Mexican Caribbean coast. Because this class and field trip program were near and dear to my heart, I always allowed CCS scientists, assistants, and resources to be involved in this international travel/education experience. CCS provided Zodiacs, outboard motors, SCUBA tanks and compressors, as well as other diving and field gear over the years. Not only were numerous students educated in coral reef ecology and conservation, 22 students did their M.S. thesis research on coral reef environments in Mexico, and one Ph.D. dissertation was completed there.
3. Scientific Diving Program—After many years of a fairly loose and simple diving program, Dr. Quenton Dokken joined CCS and developed a strong and formal scientific diving program. In 1995, he developed a policy manual for the program, and he subsequently

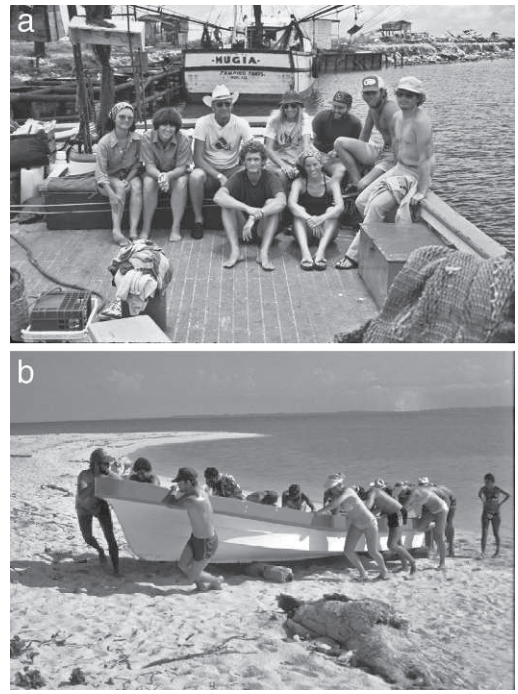

Fig. 7. Coral Reef Ecology Class at Lobos Reef (a) and Enmedio Reef (b), Veracruz, Mexico (Photos by Wes Tunnell).

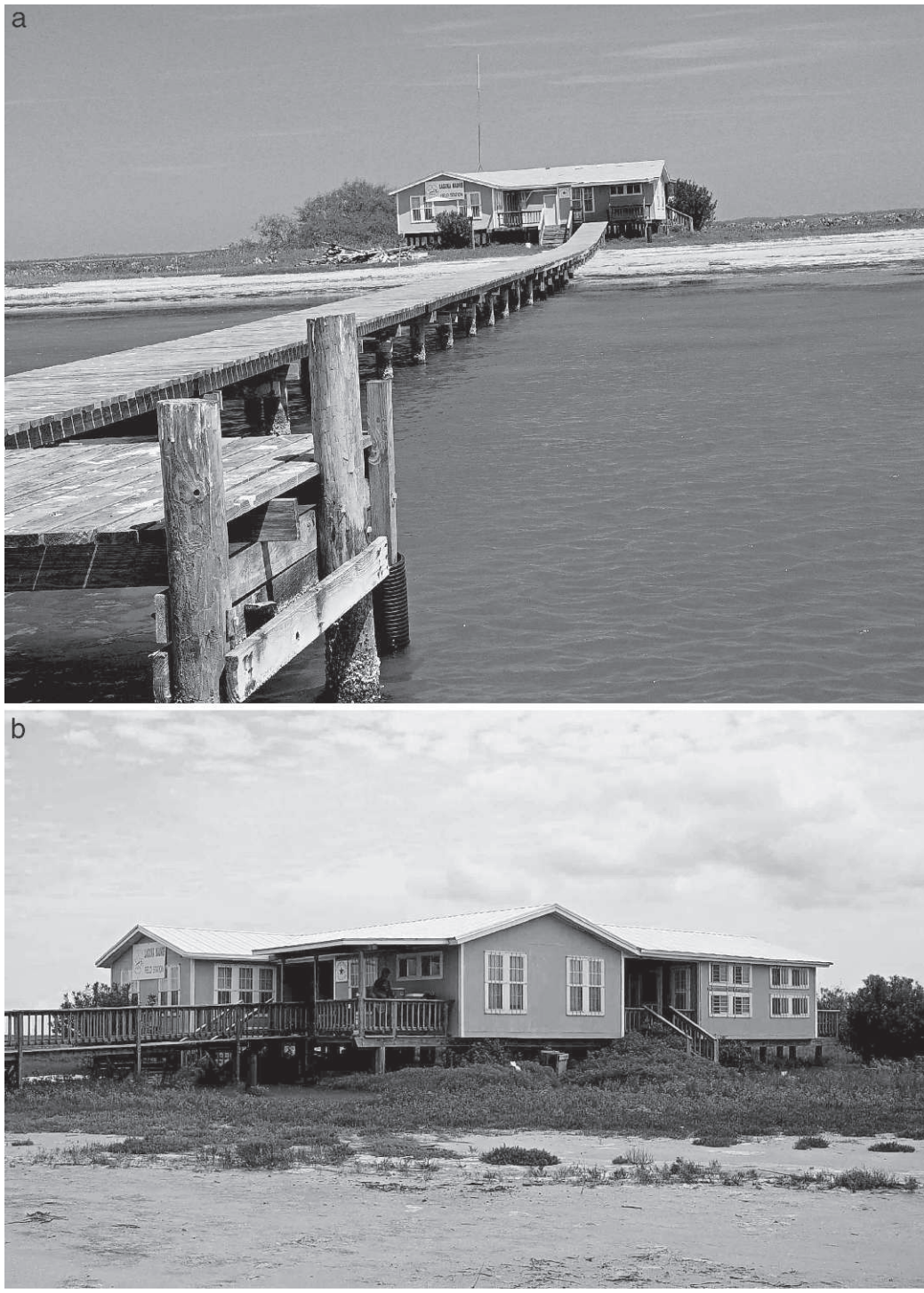

Fig. 8. Views of the Laguna Madre Field Station on a dredge material island from west (a) and south (b) (Photos by Roy Lehman).

developed a research program, mainly focused on offshore oil and gas platforms as artificial reefs and the Flower Garden Banks coral reefs. Some work focused on platform research methodology and other on platform ecology or productivity or Flower Garden monitoring.

4. Laguna Madre Field Station—TAMU-CC acquired a spoil island and old fishing cabin along the Intracoastal Waterway in the Laguna Madre in the mid-1970s. The cabin was used for field classes in marine ecology and graduate research projects, but it became so dilapidated by the end of the 1990s that Dr. Roy Lehman took on the challenge of building a new one, which is now the Laguna Madre Field Station (Figs. 1, 8). Located about 6.5 miles south of the John F. Kennedy Causeway, this three-room facility has kitchen, dining, lab, and sleeping quarters for about 20 people, and it has a new pier extending from the cabin into the Laguna Madre. The facility is once again being used for classes and research, and Dr. Lehman is Director of the facility for the university.
5. National Ocean Science Bowl (NOSB)—This national competition for high school students has stimulated great interest across the United States, and it is highly regarded as a successful and effective program for students learning about the oceans. It is sponsored by the Consortium for Ocean Leadership and involves competitions each year, ending in a national championship meet with great prizes to visit leading oceanographic facilities. CCS has sponsored the Texas or South Texas NOSB for the past 10 yr.
6. Gulf Coast Studies book series—In 2001 I became the General Editor of the Gulf Coast Studies book series sponsored by TAMU-CC and published by Texas A&M University Press. The series, now called Gulf Coast Books, includes titles regarding all disciplines (history, art, natural science) of the Gulf coast. The goal is to publish at least one book per year, and there are over 15 books now in the series.

The Future

Since its inception, the CCS has maintained a hallmark of hands-on, field-oriented coastal and marine studies, with particular emphasis on involving students. Although tightening state budgets may challenge CCS with future changes, the quality and dedication of the staff to students and research will endure. Further information and current news about CCS can be found at www.sci.tamucc.edu/ccs/.

With assistance from all lead researchers at CCS, we prepared a book on the first 25 years of history, growth, and development of the Center (Tunnell, 2009). In August 2009, after 25 yr, I stepped down as Director of CCS and handed that responsibility to the very able Dr. Paul Zimba.

Acknowledgments

I am very thankful for the Southern Association of Marine Laboratories (SAML); my involvement with SAML allowed me the opportunity to meet many other marine lab directors and to visit their facilities. This aspect greatly facilitated my development and directing of CCS.

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