

Stewardship and A Sense of Place in the Gulf of Mexico

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As Assistant Director for Florida Sea Grant and Assistant Dean for Environmental & Natural Resource Programs my responsibilities are to link diverse extension programs ranging from aquaculture to water quality to forestry and fisheries and across different disciplines to solve problems that stretch from the uplands to the coast. I provide leadership to aquatic, coastal, marine, and natural resource programs and interact with our University of Florida county agents and campus-based specialists and with research faculty at all participating Sea Grant institutions within the state of Florida to incorporate research results into outreach programs.

I have nearly 30 years of professional experience in university outreach and extension activities. I've worked in Wisconsin, Oregon, Washington and Florida working on a variety of environmental and natural resource issues. While living in Seattle, I also had the opportunity to teach courses in environmental science, environmental ethics and organizational behavior at the University of Phoenix-Washington campus

I have served in a number of leadership roles regionally and nationally, including serving on the board of directors and chair of the National Assembly of Sea Grant Extension Program Leaders and President of the National Marine Educators Association. Since 1990, I have developed and led a number of teacher workshops that focus on stewardship and environmental ethics. I have published 12 referred journal articles, 31 technical papers and reports, non-referred journal articles and conference proceedings, has made 47 invited presentations and has participated in a large number of other extension programs and presentations.

I have a BA from University of Wisconsin-Parkside, MPA (Public Administration) and MS (Water Resource Management) from the University of Wisconsin-Madison and PhD (Urban and Public Affairs-Environmental Policy) from Portland State University. For fun, I like to fish, canoe, and play the piano.

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Over the past six weeks you have had a variety of field-based experiences coupled with online lectures on a variety of topics that have hopefully broadened your perspective on the Gulf of Mexico. As educators we expect that our students will increase their knowledge about the subject that we teach. From an environmental education perspective, we also hope that our students will move from awareness to understanding to positive action on behalf of the environment, that is practice sound stewardship. However, it is not as easy as it sounds.

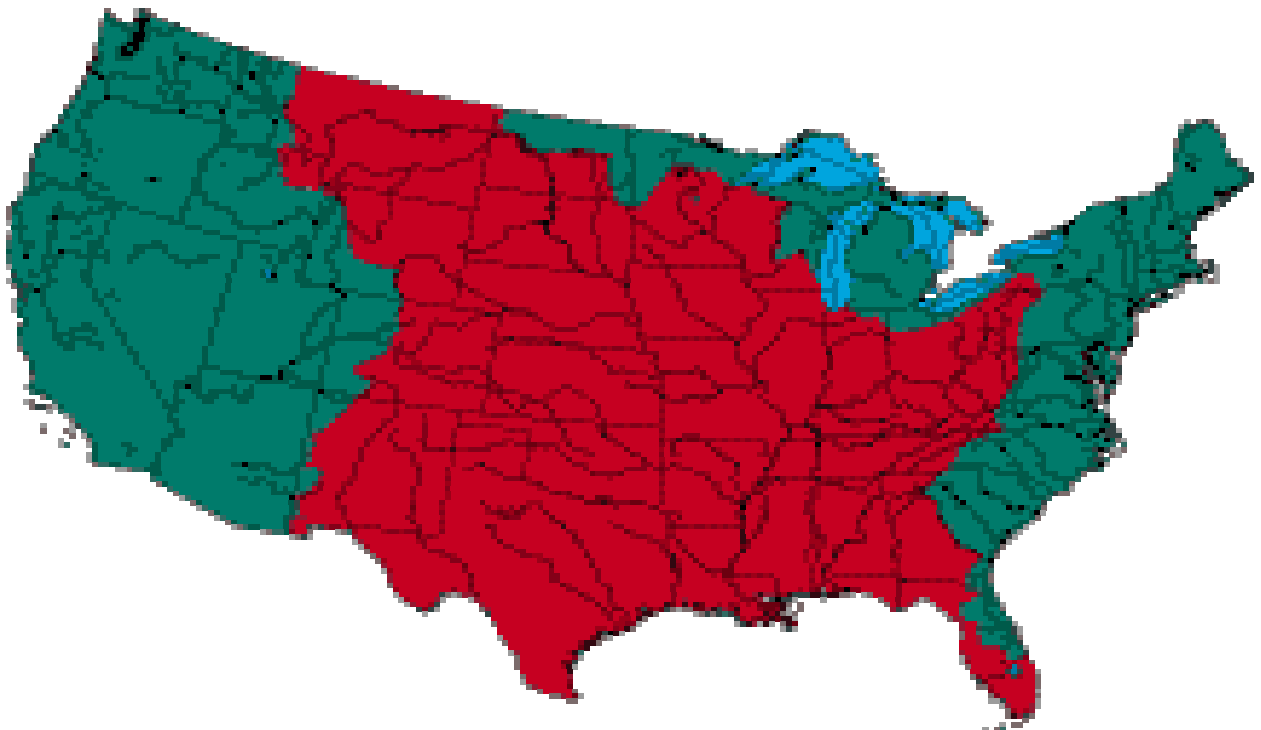
The Gulf of Mexico is “America’s Sea” and is undergoing significant change. In our COSEE Institutes each one of you has increased your awareness of the uniqueness of the Gulf of Mexico through the hands-on, field-based activities. Through the distant learning program, you have developed a better understanding of habitats, processes and technologies. But will that lead you to positive actions and become a better steward of the Gulf of Mexico? This presentation will take both a philosophical and practical look at how we move from the awareness to understanding to action state, and how we might instill this process in our classroom, home and community. Moving from an awareness to action state is a continual journey, especially in our technological, consumer-oriented world. Hopefully this presentation will cause you and your students to think about how we interact with the environment on a daily basis, and what actions (or inactions) you take ultimately impact the Gulf of Mexico.

The Gulf of Mexico Watershed

Although we are studying ocean science and our focus is on the Gulf of Mexico, we cannot just turn our attention and eyes to the water. We need to think holistically and be well aware of the land-based side of the Gulf of Mexico and how our land activities affect it. Previously you received an excellent lecture

on hypoxia and the “dead zone” from Dr. Rabalais. She demonstrated that the impact of increasing riverborne nutrients from upstream land users have ultimately led to a deterioration of our coastal water quality in the Gulf of Mexico. Human activity on land has had a major impact on the water quality and health of the Gulf of Mexico.

In order to truly study and understand the Gulf of Mexico, you and your students need to understand what a watershed is. A watershed is a drainage area of land where water flows across, or under, on its way to a stream river, or lake. The adage of water always flows downhill is clearly demonstrated. The Gulf of Mexico watershed is a landscape of interconnected basins (watersheds) with the water draining to its lowest point to a stream, river, lake, or seeping into the ground to a waiting aquifer. On it’s way, the water travels across urban, suburban, and rural lands. As it travels across farmlands, forests, city streets, suburban lawns, it may pick up chemicals, nutrients and pollutants that may eventually find their way into the Gulf of Mexico.



The Gulf of Mexico watershed is huge. It drains nearly two-thirds of the continental landmass of the United States that includes parts of 31 states. So, individuals living in Wyoming, Illinois or New York may have an influence on the health of the Gulf of Mexico. It's not just those living in the coastal states of Texas, Louisiana, Mississippi, Alabama or Florida that have an impact on the health of the Gulf. For general information on the Gulf of Mexico and student educational resources, go to <http://www.epa.gov/gmpo> or <http://www.gulfbase.org>

Stewardship

What does it mean to be a steward? One definition is that a steward is “one to whom a trust has been given. In reference to our natural lands, stewardship is an attitude of active care and concern for nature” (Nebel, 2000). In other words, it is that internal ethical and moral framework that leads us to both public and private actions. How does one become a steward? The noted wildlife ecologist and naturalist Aldo Leopold suggested if we just developed an awareness and understanding about the world in which we lived, it would come naturally and we would automatically make the right decisions. He stated the following:

“...I am trying to teach you that this alphabet of ‘natural objects’ (Soils and rivers, birds and beasts) spell out a story...once you learn to read the land I have no fear of what you will do to it, or with it...” (Flader, 1991)

Is this necessarily the case? In a recent Gallop poll, over 90 per cent of Americans stated that they considered themselves to be environmentalists. If this is the case, why then do we continue to have environmental issues and problems? It is beyond the scope of this presentation to delve deeply into the field of environmental ethics and how individuals act and behave. However, we

should remember that ethics does depend on an internal value and belief system that we each have, and that not all individuals see the world in the same light. Look at the following picture. What do you see?



Did you see the young woman? Did you see the old woman? Can you see both? As with the case with this picture, individuals view the environment in various perspectives. There are a number of different opinions among environmentalists on how they view and value the world (their environmental ethic) in which they live and how individuals “ought to” act and behave.

Various environmental philosophers have developed a variety of classifications on how individuals perceive the environment. Yoder provides four

classifications. **Anthropocentrism** presents the view that the environment is for human use and the primary reason to preserve it is for our use and consumption. In this perspective, the main purpose in stopping environmental degradation is to minimize harm to humans. **Sentientism** presents the view that rights should be given to those living things that are capable of experiencing pain or pleasure. Individuals who generally fall into the animal rights movement share this perspective. A third type of classification **biocentric individualism** is held by individuals who think that all animals (even those without a simple nervous system like clams, spiders and insects) have rights and deserve some moral consideration. A fourth type is called **holism**, where individuals view the welfare of systems of living things (ecosystems) rather than individual animals. Thus the whole may be more important than the sum of its parts (Varner, 1988).

The point of this discussion is that there is a continuum of perspectives on how individuals perceive to use the environment that range from a human-centered view (Humans are superior to nature. What can it do for me and how can I best control it?) to an earth-centered view (humans share equal status with the rest of nature. How can I respect it?). A question you should ask yourself is what philosophical perspective do you have and where do you fit on this continuum? Do you have a consistent perspective and base for all your actions and behaviors? Most individuals hold an environmental ethic that is somewhere in the middle of this continuum. We find that we shift up or down this continuum, depending on the issue or situation. People who are serious about developing a strong environmental ethic attempt to minimize the inconsistencies between what they say they value and how they live.

In our teaching and daily decisions, we strive to insure that we utilize information and base decisions that are science-based. Yet decisions are not made on science alone. Conflicting values and beliefs all come into play. This is evident in the case study that Dr. Rabalais provided in “Beyond Science into Policy: Gulf of Mexico Hypoxia and the Mississippi River.” In this real-life

situation, scientists, decision-makers and the public came together to develop a compromised management plan to improve the water quality within the Gulf of Mexico watershed. Science, politics, and corresponding values all played a role in the final decision (Rabalais, 2002).

In teaching about these environmental problems and issues, one needs to think about the young woman/old woman picture. In teaching about these issues, one needs to bring into play these different perspectives (values and beliefs) and instill critical thinking and problem solving skills in our students. An excellent resource that deals with how one approaches this in the classroom is *Investigating and Evaluating Environmental Issues and Actions* (Hungerford, 2003).

Let's return back to the question of how individuals develop an awareness and appreciation for the world in which they live, leading to becoming environmental stewards. Individuals are influenced by both people and place.

People

People are a big influence in our lives. We develop our heroes, heroines and mentors by observing the values and actions of others. These individuals serve as character models for our behaviors and set standards for us to follow. Who are the heroes and heroines of today's youth? Many come from the music, movie and sports world. But are these real heroes or heroines? A real hero or heroine is someone that does something above the norm for the greater good and provides leadership qualities for something just and fair. Are there other definitions and or traits that make a good hero or heroine? Recent current events have moved individuals from the fire fighting, law enforcement and military professions into the hero and heroine category. What traits and actions have caused them to move into the limelight of the mass media?

How does this relate to the environment and the Gulf of Mexico? Are there environmental heroes and heroines? We can generally rattle off well-known names like Aldo Leopold, John Muir, Jacques-Yves Cousteau, Rachel Carson, Bob Ballard, and Sylvia Earle as individuals who have worked on behalf of the environment. However, one should note that there are many thousands of individuals who are stewards on a much lesser scale. Think about where you live. Do you have individuals that have made a difference in your area on behalf of the environment? Would you consider them an environmental hero or heroine? In a number of workshops that I have presented, I have asked participants the question “who has been an environmental hero or heroine to you that has influenced your life.” After some reflection, answers come back that it was their parents, grandparents, or teacher that made an impact in their lives. These individuals provided the stimulus to pursue a particular profession or become active in an environmental issue.

Today there is a fatalism and pessimism expressed by many over the environment. These individuals believe that we have no control over the direction of society and consequently we can make little difference in society’s use of its resources. Others feel that the world is moving much too fast, and that if they can’t change the world quickly, they will not try to change any of it. Consider the following two quotes to counter this thinking.

“...Almost anything you do will seem insignificant, but it is very important that you do it...”
(Mahatma Gandhi)

“...Never doubt that a small group of committed citizens can change the world. Indeed, it is the only thing that has...”
(Margaret Mead)

Individuals can and do make a difference in our thinking and attitudes about the environment. Teachers are in a unique profession that can provide an both an awareness and understanding to their students of the world that they live in, as well as providing them with hope and inspiration about the future. We

face large problems today, but we also have found solutions. These solutions rest upon many individuals taking positive actions.

In my workshops, I have found a particular video useful to convey this positive approach. The Earth Communication Office (ECO) has developed a series of one to two minute public service announcements (PSAs) showing how individual actions have made significant differences in the world. The ECO Board of Directors is composed of leaders in the film, television, music and advertising industry who are using their communication skills to educate and inspire individuals that positive actions do “make a difference.” These PSAs have been endorsed and supported by many environmental and scientific leaders, as well as the United Nation’s Environmental Programme. They have been translated into the seven official languages of the United Nations and have been seen by more than one billion people worldwide on tens of thousands of movie screens and hundreds of television stations. These high-quality, award-winning PSAs combine beautiful scenes with powerful messages to educate individuals about being a better environmental steward and inspiring responsible action. Because of their short length and inexpensive price (they provide discounts to schools) they are ideal for classroom use and workshops and can stimulate much discussion. Additional information on the ECO and the PSAs can be found at <http://www.oneearth.org>.

Place

Places also have a large influence on individuals that contribute toward developing a stewardship philosophy. Many writers have commented on the sense of place and individuals.

“...The mechanism underlying human moral conduct is the desire for attachment or affiliation. (J.Q. Wilson, 1993)

“...To know the spirit of a place is to realize that you are a part of a part and that the whole is made of parts, each of which is whole. You start with the place you are whole in...”
(Snyder, 1990)

“...We can only be ethical only in relation to something we can see, feel, understand, love, or otherwise have faith in...”
(Leopold, 1949)

Think about those special places that are near and dear to your heart. Why do you feel these places are special? In most cases, it is because we have visited these places, we have learned about them, and they have been incorporated into our thought process. In today’s world, our students are becoming prey of what some writers call an “extinction of experience.” Because of our fast-paced, technologically-driven society; increased use of videos, entertainment centers, computers, and the internet that keeps our youth indoors; the fear of liability issues with school-sponsored field trips; and the increased urbanization of our lands that reduces the natural places we can visit, our youth are losing touch with the world in which they live.

While living in the Pacific Northwest, I had the opportunity to know Robert Michael Pyle, a noted naturalist who suggests that unless our youth develop an early appreciation of the land and water around them – a relationship born of intimate and direct experience – they are unlikely to become stewards, willing to protect and preserve that which they never have know. Pyle also points out that our experiences do not only involve the far-off national parks and wilderness areas, but the nearby open spaces and vacant lots that both young and old can explore (Pyle, 1993).

This theme of place and exploring close at home is also reflected in the writings of Richard Nelson, an anthropologist who realized, over time, that there are many paths to developing an awareness and understanding of the world in which we live. He realized that it was not the particular place he chose for his

work, but that he had chosen a place to focus on and learn about. He stated that what makes a place “special” for an individual is the way it buries itself inside the heart, not whether it’s flat or rugged, rich or austere, wet or arid. Upon reflection, he further stated

“...slow-minded Norwegian, it’s taken me all these months to figure out what I’m trying to do here...I wonder what it would mean if each person, at some point in life, set aside a time to become thoroughly engaged with a part of the home community: a backyard, a woodlot, a pond, a stretch of river, a hillside, a farm, a park, a creek, a country, a butte, a marsh, a length of seacoast, a ridge, an estuary, a cactus forest, an island. How would it affect the way each person views herself or himself in relationship to the natural surroundings, or the earth as a whole? (Nelson, 1989)

Some writers suggest that developing a sense of oneself in relation to natural social ecosystems is a necessary foundation for the labor of stewardship and environmental advocacy. Mitchell Thomashow has found that adults, when asked to recount environmental experiences, were most interested in exploring their “childhood memories of special places, perceptions of disturbed places, and contemplations of wild places (Thomashow, 1995). Others have had adults develop childhood maps of their special places when they were of middle school age to help them discover the experience and value of place in their lives (Smith, 1997). Finally, others have youth and adults develop “green maps” that have them develop visual representations of their current local environmental and cultural sites. These mapping exercises provide experiences and reinforcement in geography, civics and science, promotes cooperative learning, and sharpens their powers of observation (Zuber, 1998). Individuals can get more information on green mapping by contacting <http://www.greenmap.org>.

Thus, the influence of place is an important link in how we view our world and establish our stewardship philosophy. How well do you or your students know your “place” around your home, school, or community? How does it fit into our investigations in the Gulf of Mexico?

The New Three Rs

With the rise of the environmental movement of the past 40 years, individuals consider themselves to be good environmental stewards if they practice the three “R’s” of recycle, reduce, and reuse. These continue to be important today, but are they the solution to our pressing problems? Perhaps it is time to reflect and change our thinking and actions in additional ways.

Milt McClaren, Professor Emeritus at Simon Fraser University identifies four flaws in the way humans think about the environment and themselves (Knapp, 1999). The first flaw is equating growth with progress and goodness. Many in our society assume that every thing done in the realm of commerce is sustainable. McClaren suggests we also need to look at economic decisions based on principles on how our natural systems work.

The second flaw assumes that science and technology has all the answers to our problems without humans having to take actions or change their behavior. This is the “technological fix solution.” McClaren points out that people must still decide among many alternatives in choosing the most responsible action to take. Technology alone will not provide a solution to our problems.

The third flaw in our thinking is caused by the confusing differences on number, quality, quantity and value. McClaren points out that not everything can be counted or assigned a number. Intangibles such as clean water or scenic views are very difficult to quantify. McClaren feels our schools have not done a very good job in this area. He states that essential components of an environmental ethic (steward) such as empathy for living things or respect for ecosystems cannot be measured by using standardized tests or measurements.

Finally, the fourth flaw in people’s thinking is in how humanity views its place in nature and the current level of scientific understanding. He feels that

many people disassociate themselves from the natural world in which they live and that they do not fall under the laws that govern how ecosystems work.

McClaren gives us much food for thought. It may be time to emphasize a new “three R’s of responsibility, renewal and respect” for the world in which we live. In looking at the Gulf of Mexico, we have learned that human’s activities and actions on the landscape can have major influences many miles from where they live. Having a better awareness and understanding about the habitats and processes of our ecosystems and developing positive actions through incorporating a new set of “three Rs” is something we need to think about as we develop a sense of stewardship and sense of place in the Gulf of Mexico watershed.

Concluding Remarks

We live in a rapidly changing world. Change is the norm. In order to insure that the Gulf of Mexico and other bodies of water are sustained, it will be necessary to continue to provide opportunities to increase awareness, and understanding that lead to positive actions among the citizens and adaptive management by the decision-makers who live within the Gulf of Mexico watershed.

It is important to realize that developing and living as an environmental steward takes all of us on a lifelong path that more often than not is an uphill battle. Living in our modern society does makes it difficult to minimize our impacts on our environmental systems. Change also is not comfortable at first. Try this exercise. Step away from your computer and cross your arms across your chest. Feels comfortable. Now, cross your arms the opposite from what it is now. Does it feel strange and different? Doing something new and different for

the first time may feel uncomfortable and awkward at first; however, through time new thinking and actions will soon become part of your daily life.

We will continually have to deal with trade-offs and compromises in the world in which we live. However, by better understanding your own individual environmental ethic and philosophy, you can use it as a guide to make your personnel decisions.

I hope my brief presentation has stimulated some thinking about “stewardship and a sense of place in the Gulf of Mexico” and that it will generate some discussion and debate. I thank you for the opportunity to share some of my thoughts and idea with you. I look forward to hearing from. Best wishes to you in COSEE, and what lays ahead for you in your home, school, and community!

References

Abrams, David. 1996. *The Spell of the Sensuous: perceptions and language in a more-than-human world*. Pantheon books, New York, NY.

Carson, Rachel. 1956. *The Sense of Wonder*. Harper & Row Publishing Company, New York, NY.

Des Jardins, Joseph R. 1993. *Environmental Ethics: an introduction to environmental philosophy*. Wadsworth Publishing. Belmont, CA.

Earle, Sylvia A. 1995. *Sea Change: a message of the oceans*. G.P Putnam's Sons, New York, NY.

Flader, Susan L., and J. Baird Callicott, Editors, 1991. *The River of the Mother of god and Other Essays by Aldo Leopold*, University of Wisconsin Press, Madison, WI.

Hastie, Bill, Dru Clarke and Patty Bowers. 2001. *Watersheds*. Currents: Journal of Marine Education. Vol. 17, No. 1. National Marine Educators Association, Ocean Springs, MS.

Hungerford, Harold R., Trudi L. Volk, John M. Ramsey, Ralph A. Litherland, and R. Ben Peyton. 2003. *Investigating and Evaluating Environmental Issues and Actions*. Stipes Publishing, Champaign, IL.

Knapp, Clifford E., 1999. *In Accord With Nature*. Clearinghouse on Rural Education and Small Schools, Charleston, WV.

Kohak, Erazim. 2000. *The Green Halo: a bird's-eye view of ecological ethics*. Open Court Press, Chicago, IL

Leopold, Aldo, 1949. *Sand County Almanac*. Oxford University Press, New York, NY.

Lindholdt, Paul 1999. "Writing from a Sense of Place," *The Journal of Environmental Education*. Vol 30, No. 4, Summer, Heldref Publications, Washington DC.

Nebel, Bernard J., and Richard T. Wright. 2000. *Environmental Science*, Prentice-Hall, New York, NY.

Nelson, Richard. 1989. *The Island Within*. North Point Press, San Francisco, CA.

Orr, David W. 1992. *Ecological literacy: education and the transition to a postmodern world*. State University of New York Press. Albany, NY.

Orr, David W. 1994. *Earth in Mind: On education, environment and the human prospect*. Island Press, New York, NY.

Pyle, Robert Michael. 1993. *Thunder Tree: lessons from an urban wildland*. Houghton Mifflin Press. Boston, MA

Rabalais, Nancy N., R. Eugene Turner and Donald Scavia. 2002. "Beyond Science into Policy: Gulf of Mexico Hypoxia and the Mississippi River," *BioScience*, Vol. 52, No. 2, February, 2002.

Smith, Gregory, 1997, "Coming Home: What Childhood Maps Reveal About the Experience of Place," *Clearing: Journal of Environmental Education in the Pacific Northwest*, No. 96, Winter 1997, Portland, OR.

Snyder, Gary 1990. *The Practice of the Wild*. North Point Press, San Francisco, CA.

Thomashow, Mitchell. 1995. *Ecological Identity: Becoming A Reflective Environmentalist*. MIT Press, Cambridge, MA.

Varner, Gary. 1988. "The Role of Environmental Ethics in Environmental Education." In *Environmental Ethics: Strategies for Implementation – Nonformal*

Workshop, edited by C.H. Yapple, National Association for Environmental Education, Orlando, FL.

Wilson, J. Q. 1993. *The Moral Sense*, Free Press, New York, NY.

Zuber, Robert W. 1998, "Green Mapmaking" *Green Teacher*, No. 58, Toronto, Canada