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THE IMPORTANCE OF BIOREGIONAL EDUCATION

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ABSTRACT—This gathering is to celebrate a specific bioregion. Our individual job descriptions specify that we investigate the biology of the region. I think it is also part of our job to communicate our findings. That is what bioregional education is all about. We all love this region, devoting years of our time to learning all that we can about its ecological history and ecological dynamics.

Ecological changes are caused by ongoing evolutionary and ecological processes. Specific events happen by chance. We scientific humans are separate and dispassionate observers. Our scientific journals, filled with logical and sequential explanations of our findings are not an easily accessible medium for our fellow citizens to learn of our work.

Every ecological region has its own vernacular of soil, sky, flora, and fauna. All of this creates a particular state of mind, i.e., a place-specific intelligence shared by the humans within. Aridlands people know of the lessons brought by drought. Faith and endurance are products of drought's hardest lessons. Plains people learn the illusory lesson of "limitlessness" and learn humility under the huge dome of sky. Learning that one is a mere dust mote liberates the mind.

Despite ourselves (even those of us that are totally urban people) we do irrevocably possess an ecological identity. Our job, as investigators of this particular bioregion, is to increase the level of common knowledge about our neighboring flora and fauna to more deeply establish that identity within our audience.

This gathering to celebrate a specific bioregion is a sign of our maturing as a society. We are gathered to share stories of the Chihuahuan Desert. Much of our focus is the biology of the region, but we include a cultural anthropological aspect within our investigations. Keith Basso, in *Wisdom Sits in Places: Landscape and Language Among the Western Apache* (1996) outlines how people interact with their geographical landscape in at least three distinct ways.

First, people observe the landscape as a matter of course during the average working day. Second, our fellow citizens use the landscape in non-consumptive or consumptive ways. Some activities modify the landscape to varying degrees. Third, we communicate about the landscape, and that is what bioregional education is all about. We all love this region, devoting years of our time to learning all that we can about its ecological history and ecological dynamics.

Our western intellectual traditions are strictly empirical and rationalistic. Ecological changes are caused by ongoing evolutionary and ecological processes. Specific events happen by chance. We scientific humans are separate and dispassionate observers. Our

scientific journals, filled with logical and sequential explanations of our findings are not an easily accessible medium for our fellow citizens to learn of our work.

The field of “nature interpreting” has evolved in response—William Bartram, Thoreau, Muir, Walt Whitman, Enos Mills, Sigurd Olsen, Aldo Leopold, Joseph Wood Krutch, Paul Shepard, and others inspired thousands of people to choose careers in the national and state park services, Forest Service, nature centers, ecotourism, and academia. There are a plethora of interpretive writers now working—Gary Snyder, David Rains Wallace, Ann Zwinger, and Barry Lopez are the “grand old masters” of today. David Abram, Michael Thomashow, Keith Basso, Richard Nelson, Cheryl Glofelty, David Orr, and others have broadened the interpreter’s perspective more recently.

The popularity of the Discovery Channel and the Animal Network indicate that our fellow citizens subconsciously ache with a need to connect with the natural world. A recent occurrence also illustrates this. Entomologist Michael Quinn of the Texas Parks and Wildlife Department put out a public information release about black witch moths.

The story was picked up by many local television channels, including one that serves the northeastern reaches of the Chihuahuan Desert. Hundreds of people called the television station, Sibley Nature Center, Animal Control, and the Texas Parks and Wildlife Department within days, and calls continued for another two months. Quinn reported that he was completely bowled over with the widespread nature of the response, which included reports of black witch moth sightings from coast to coast.

Every ecological region has its own vernacular of soil, sky, flora, and fauna. All of this creates a particular state of mind, i.e., a place-specific intelligence shared by the humans within. Aridlands people know of the lessons brought by drought—faith and endurance are products of the hardest lessons. Plains people learn the lesson of “limitlessness” and humility under the huge bowl of sky above—learning that one is a mere dust mote liberates the mind. Despite ourselves, we possess an ecological identity. Our job, as investigators of this particular bioregion, is to increase the level of awareness of that identity in our audience.

The purpose of place-based knowledge is to create a clear self-definition for every citizen. Definition comes by a person learning the relationships that unite him or her to the natural world and the local human adaptations and traditions.

The daily life of the most plentiful of the living organisms in our bioregion should be common knowledge to all citizens. What has been termed “folklore” represents the common knowledge of citizens without access to scientific information. This

summation of local knowledge about the local landscape as part of the tools of survival was ignored by proponents of public education. To make the learning of the scientific knowledge easier, it is best to replace existing folktales with stories containing tidbits of fascinating and wonderful scientific information about our regional inhabitants. Humans learn more from stories that present multi-faceted, holistic, and inclusive information—not from the dry, rote, regurgitative pedagogy of the modern educational institutions.

A basic goal is to hope that our fellow citizens can pass the following test: Can you write a full page on each of the 400 most common organisms around you—from insects, to birds, to major predator, to parasites? Can you tell the period in the “natural calendar” in which they are active? Can you tell which interact with another on the list? Can you tell which habitat they prefer? Can you briefly outline the multicultural human history of this region? Can you tell folktales that originate in your region?

Unfortunately, our educational institutions present ecological information in broad based survey form that is not regionally specific. The study of organisms is done from a cell to organism pedagogy, not from an ethological and ecological relationship approach. Our goal, then, is to teach our fellow citizens about their own home—at present, children and adults formulate much of their perception of their world from television. National television programming by its very nature can only present shallow stories that appeal to a common denominator. Local media outlets rarely present a story with a bioregional perspective—but when they do, as in the case of the black witch moth—the audience’s response seems to pass unnoticed and does not change the content and purpose of the medium’s future stories.

In-depth familiarity with one’s own human and natural environment has not been recognized as important in modern American society. Bioregionalism is biophilia and patriotism wrapped into one, i.e. a love of one’s home surroundings. It is a broadening of self-knowledge—a person may know about their own emotional and philosophical responses to human interactions, but do not actively pursue developing a relationship with the landscape and its denizens.

As a bioregionalist, I believe the time has come for a stronger push to institute bioregional education into local educational and media venues. Our fellow citizens respond with great vigor to historical and cultural information, and interest in the natural history information seems to be growing. It is time to be creative in determining ways to present our hard-won information.

There are several tools to develop for effective bioregional education. First, develop a timeline of the ecological history of the region, then develop a list of the 400 most

common present-day organisms, the natural calendar for the region, and collect every bit of written information on the region for the development of collections of local folklore and vocabularies, and to flesh out a regional historical continuum (a set of stories that follow a timeline.) Investigate pre-Anglo settlement history and identify Indian and Hispanic leaders and lifeways. Collate all information concerning the history of the region's Jewish, black, and Asian settlers and specific European groups that colonized the area. Determine the economic forces that drove each group's interaction with the natural resources of region. (For example—the hides of the millions of buffalo slaughtered on the Great Plains became machine belts of the Industrial Revolution.)

Storytelling is the oldest form of education. Children, mesmerized by its cadences, and intrigued by the surprises verbally and dramatically, absorb information in amazing volume. Our minds learn best holistically, and not with the linear method that first evolved in adult monastic instruction and formalized for public schools only 120 years ago by Dewey. Humans possess associative minds. Rote learning is rigid and is often perceived as a force to be impressed upon the student. Many kids hate learning because of that perception.

Stories are mnemonic—easy to remember. Mnemonic instruction recognizes that there are myriad influences swirling simultaneously in a student's brain. A story is more enjoyable, more playful, more low-key, and in the long run, teaches more than linear rote instruction. Stories are for every age level. Small children will listen for the plot. Pubescent children will listen for personal relationship information. Adolescents will listen for coming-of-age information. Adults will listen for subtleties, word play, and reaffirmation of cultural standards.

Concepts that are difficult to cover in rote instruction, such as religion and sex, are much easier to portray in story form. Moral issues are best taught by the multiple perspectives of story. When moral issues are presented as agreements among members of society instead of edicts and laws of arbitrary limitation, it promotes a sense of will within the child to accept and participate what is appropriate for society. Mnemonic instruction teaches one to appreciate subtlety and other such arts of communication. Words become like candy, to be rolled around in the mind's mouth, tasted and savored and deeply appreciated.

When a Navajo travels within the four mountains of his homeland, there is always a landmark in view that has a story. Stories pass not only knowledge of the land and animals, but the world view of the region's inhabitants. Character traits are in every story. Keith Basso's book is about a group of Apaches so richly and intimately involved with their landscape that they correct a wayward tribal member by merely saying the name of a landmark. The wayward person remembers the story of the landmark and

realizes he or she has been acting in an inappropriate way. We can aspire to approach their sophistication, despite our more transient society.

Naturalist-interpreters and educators have a great deal of work to do, but the future is promising. Partnerships among non-traditional education providers, education providers, and local media should be developed to the utmost extent. Networking is a primary goal, as is the collecting of bioregional information so that the process can move steadily ahead. Bioregional education is important.

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