Trumpeter (1994) ISSN: 0832-6193 THE MANY FACES OF HUMAN PARTICIPATION WITH NATURE

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## I. Participation and Choice

We the people of Western civilization, whether we acknowledge it or not, are an inseparable part of Nature. That notwithstanding, how we participate with Her in creating our environment is a choice of motives, thoughts, and actions. In our choices we have free will. So how we choose will be the saving grace of human society or its condemnation.

The personal and social dilemma in exercising our free will is that as we assign a price to something and come to know its material cost, we too often lose sight of its spiritual value. In so doing, we're learning the cost of much and the value of little. A thing's value thus becomes its imprisoned splendor.

A number of people, for example, are awed by the use some early Aboriginal-Americans have made of the English language, and wonder why European-Americans couldn't speak in their own tongue with such eloquence. The answer seems simple enough. The Aboriginal-Americans weren't speaking English. They were speaking their own language - the thoughts of their hearts - through English words.

They were speaking of their sacred participation with the Earth while the European-Americans were speaking about ownership of land, economic exploitation, and accumulating personal wealth. Put another way, the Aboriginal-Americans spoke of tangible peace among people and good will towards the Earth, whereas the European-Americans spoke of peace on Earth in the abstract and good will towards men.

What makes our union with Nature and life either sacred or profane is how we choose to participate - our attitude, the womb action. The sacred is the expression of value enthroned in one's heart, which is straight, simple, and open. The profane is the cost/benefit rationalization of the intellect, which is convoluted, nebulous, and guarded. Where the sacred shines with the crystalline purity of intent and an innocence of execution, the profane is clouded with murky undercurrents and jagged edges of greed and competition for maximum personal gain.

Although we have no choice but to participate with Nature simply because we exist in and of Her, we can and must choose how we participate, because par-

ticipation is the active part of relationship. And we must exist in relationship.

That we are the products of our motives, thoughts, and actions, those elements of our behavior that determine the quality of our participation with life and Nature, is illustrated by a youth who shoves an old man out of the way. "Move over old man," says the youth who sees only infirmity in the wrinkles of age. The old man accepts the rudeness with the wisdom of understanding, and on regaining his balance, regards the youth. "Son," says he after a moment, "as you now are so I once was. As I now am so you will someday be." This is but saying that how we treat something or someone to which we are related in the act of living, so we shall one day be treated.

In this, as in all things, the sacredness of our participation with life is based on the consciousness of our relationship with Nature. Consider, therefore, that as far as we know, we're the only creatures that can survey the world as a whole. As such, we may be the only creatures in the world that make a distinction between a moral response and a behavioral one. Instinct, a purely behavior response as I was taught to think of it in science, is not the same as morality.

If we thus insist that nonhumans and "subequal primitive humans" respond only out of instinct, they cannot be held accountable for their behavior, regardless of what it is. If we, the civilized and educated, on the other hand, reserve the notion of moral ascendency exclusively for ourselves, then we, by definition, are morally accountable for our every action as an outworking of our free choice. With this in mind, the following two stories, The Salt Creek Pupfish and The Valley of Fire, reflect a few of the many faces of human participation with Nature and one another.

## II. The Salt Creek Pupfish

The Ancient Ones

As the last glacial stage of the Pleistocene Epoch, which began about seventy thousand years ago, reached its maximum development, subarctic plants and animals occurred as far south as what today are the states of Virginia and Texas. During the height of the glacier's development, the Bering-Chukchi platform (also called the trans-Bering land bridge) between the continents of North America and Eurasia was exposed because the sea was approximately 328 feet below its present level. When fully exposed, the Bering-Chukchi platform was a flat isthmus about a thousand miles wide between what is now northeastern Siberia and Alaska. It remained open to migrating plants and animals - including the Ancient Ones, the ancestors of today's Aboriginal North Americans - until it was again inundated by rising seas as the climate warmed and the last glaciers melted, between ten and seven thousand years ago.

These Ancient Ones were hunters of big game. As millennia passed, the hunters gradually became nomadic foragers who subsisted by gathering, fishing, and hunting small animals. In more recent times, the nomadic foragers settled into semi- permanent and permanent communities and finally became agriculturalists whose economy depended on farm crops as well as hunting with spears and bows and arrows, gathering, and fishing. They also made pottery, a sign of their evolving culture and commitment to a sense of place.

#### The Valley And Its People

While the Ancient Ones were migrating south and east out of what is now Alaska between twenty thousand and fifteen thousand years ago, the valley, today known as "Death Valley", was lush and green with streams feeding through interconnected lakes into a huge lake six hundred feet deep. In these streams and lakes lived a tiny fish, about three inches long, today called a "pupfish."

About nine thousand years ago, approximately a thousand years after the close of the last ice age, the Nevares Spring People moved into the valley. The earliest known inhabitants, they camped near springs found on fans of gravel that water washed into the valley as it eroded surrounding mountains. Time has dried some of the springs, and they're now extinct.

These wandering hunters were armed with spear and atlatl, which is a special stick forming an extension of the human arm so as to increase the power of a thrown spear. Using spears and atlatls, they ambushed big game, which was plentiful in the well- watered valley where extensive marshlands surrounded the big lake and where juniper trees covered the lower mountains. Somewhere in time, the people left the valley, probably because the game animals disappeared as the climate became even warmer and drier than it is today, which means summer temperatures ranged anywhere from 110 to over 130 degrees Fahrenheit and the average annual rainfall was about one and a half inches or less.

Around five thousand years ago, the Mesquite Flat People came into the valley. They arrived during a wet period and once again lived as wandering bands of hunters who camped low in the valley and on the fans of gravel above the valley's floor. Like the Nevares Spring People before them, they hunted with spears and atlatls.

They augmented their diet of meat by gathering wild plants and by grinding seeds with stone motars and pestles. The people inhabited the valley for about two thousand years until 1,000 B.C. They lived in the valley before the final lake dried up and formed the flat, salt pan one sees today on the valley's floor.

The Saratoga Springs People came into the valley around 900 A.D. and stayed for about two hundred years until 1100 A.D. The climate during this time was much like it is today, although there were brief periods of wetter weather. The Saratoga Springs People camped near the same springs in use today.

Big game was scarce, but the people brought the bow and arrow with them, which was an advantage in hunting. In addition to big game, they also hunted and trapped the abundant small rodents and lizards. The Saratoga Springs People augmented their diet with plants and with seeds ground into flour between smooth rocks.

A few Saratoga Springs People may have been living in the valley when the first Shoshonean People arrived about 1,000 A.D. The Shoshonean culture seems more diverse than those of their predecessors. Although their tools were simple, the people possessed great skill as exemplified by the women's, highly developed art of basket making.

The Shoshonean People were the seed gathers of the desert. Much of the year they lived among the sand dunes in simple shelters of brush where they harvested mesquite beans. But when the pinyon nuts ripened, they camped in the nearby Panamit Mountains for the harvest. They also gathered what other seeds they could and like the people before them used smooth flat rocks to grind seeds into flour.

In addition to gathering plants, they hunted such small animals as rodents and lizards and even ate adult insects and the grubs of beetles. The ability of these people to find and utilize whatever foods the desert offered was the key to their survival.

#### Pupfish, The One Species Becomes The Many

As the climate began to warm and dry in the time of the Nevares Spring People, the waters connecting the lakes went from perennial streams, to intermittent streams, to dry beds, and the lakes began to evaporate and shrink, becoming saltier as they did so. Thus, the contiguous population of pupfish inhabiting the originally connected waters of the valley became increasingly fragmented and isolated until they evolved into nine separate species.

By the time the Shoshonean People arrived in the valley, by now the hottest, driest place in North America north of Mexico, the pupfishes were already clinging to existence in completely isolated fragile habitats, some in deep holes, some in salty creeks, and some in warm springs. One of these habitats is Salt Creek.

Salt Creek comes out of deep springs and during the relatively cool months of winter and spring flows on the surface for about two miles before evaporating. In the intense heat of summer, however, the creek shrinks back to the pools of its source.

Salt Creek is the home of the Salt Creek pupfish, which in the entire Universe is found only here. During winter, when the water is cold, the fish are dormant in the mud of the bottom and virtually impossible to find. They become active, however, when the water warms in spring, and by March hundreds are visible. As the days get warmer and evaporation increases, the creek and the majority

of its pools dry up, and most pupfish die. Only a small percent survive the summer in the deep springs that form the creek's source.

#### Humans And The Salt Creek Pupfish

As the land changed over thousands of years, the single species of pupfish became the many species. In addition, various human cultures entered the valley each in its turn to somehow interact with the pupfish. Although the cultures before the days of the Shoshonean People each had a relationship with and an effect on the pupfish simply by sharing its habitat, it is during the time of the Shoshonean People that the Salt Creek pupfish is known to have been become food for humans. In spring, when the fish became numerous, the people collected them in large porous baskets. The fish were then baked in layers between tule reeds and hot ashes and eaten.

The simple society of the Shoshonean People afforded two things that have so far eluded us in modern life, ample leisure time and the peace to enjoy it. Their free time was not, however, devoted to improving their standard of living as is ours because that rung on the cultural ladder was unattainable in an environment permitting no cultural revolution.

The environment also precluded the luxury of war, an activity that requires its own technology. When warlike tribes entered the valley, the residents just slipped quietly away and hid until the intruders left.

The first European-Americans came into the valley in 1849; they, however, were simply lost. But in 1850 prospectors began pouring into the valley. The Shoshone reacted to the influx of European-Americans as they had reacted to all other invaders. But whereas the previous interlopers had always departed after a time, the prospectors, seeking to exploit the mineral wealth of the valley without interference, persisted in the valley and displaced the Shoshonean People.

Then in 1933, Death Valley National Monument was established, and a different kind of relationship began between the Salt Creek pupfish and humans. Recognizing the pupfish as a distinct species occurring only in this one, tiny creek, the people of the National Park Service devised a method of protecting the fish's habitat, while at the same time allowing thousands of visitors to experience the marvel of this tiny fish.

Each of these people, in their own unique way, have gained something and have given something through their participation with the Salt Creek pupfish. The Nevares Spring People, the Mesquite Flat People, and the Saratoga Springs People shared the pupfish's habitat in the mutual relationship of life in the valley. The Shoshonean People (some of whom still live around Death Valley) took from the fish its life as food in the great mystic cycle of death feeding life, for which they gave thanks. The people of Death Valley National Monument, protecting the fish to ensured so far as possible its continued existence, are giving

the pupfish a benefit of human consciousness and in return take with them a sense of moral ascendancy. And the tourists who visit Salt Creek receive from the fish a sense of spiritual enrichment, ecological awareness, and the wonder of Nature, while simultaneously affecting the fish by their presence in observing it.

The great irony of this story is that while the Shoshonean People used the pupfish for food, the European-Americans stole that source of food by displacing the Shoshonean People from their ancestral home. Having removed the Shoshonean People in whom they saw no value, the European-Americans, who were so destructive in their exploitation of the land they stole, ultimately turned around and responded to the pupfish through protection, scientific study, and enjoyment. But what about the Shoshonean People of today? They're still displaced, still accorded lesser value than the pupfish. Why?

## III. Valley of Fire

Beneath The Sea

About 55 mile northeast of Las Vegas, Nevada, is the Valley of Fire, a vivid land of bold cliffs amidst the grandeur of the Mojave Desert. The birth of the Valley of Fire is a story recorded in the pages of geological history, a story I shall briefly recount.

Far to the north, in what today is northwestern Utah, are the oldest rocks in the region, more than two billion years old. At the time our story begins, however, they were near the southern edge of the North American continent, and today's Valley of Fire was part of the sea floor.

As the sea floor moved northward, islands, mountain ranges in the sea floor, and perhaps even pieces of other continents were carried along on this giant conveyor belt to be crushed against the southern part of the North American continent. Some of these rocks, the oldest in the southern Nevada region, date back some 1.7 billion years.

Sometime around a billion years ago, heat from deep within the Earth caused a north-south ridge to develop through the newly sutured continent. This ridge ruptured to the east of the Valley of Fire and the continent ripped apart in a northerly direction. The western fragment drifted slowly away from North America and is probably lodged in what is now Asia as a portion of central Siberia.

The rift between the remaining continent and the drifting western fragment filled with dark, heavy, molten rock from below the Earth's crust. The thermal swelling along the continent's edge slowly contracted as the heat began to subside. About 600 million years ago, as the continental margin gradually sank,

sea waters flooded the low-lying heavy rock and a new ocean was born over the Valley.

The ocean's shimmering waters were hundreds of feet deep and extended as far as the eye could see in all directions. Myriad plants and animals thrived in the warm waters, and life evolved in complexity during the 300 million years the ocean covered the Valley as simple jellyfish and worms gave way to clams and complex fishes.

Life evolved explosively in this fertile environment, and virtually every niche was occupied by living beings. The ocean occasionally retreated, leaving piles of shells and vast limy mudflats to dry, crack, and harden under the summer sun. But for most of the 300 million years, the Valley was a watery world in which thick piles of lime muds and shells were deposited, layer upon layer.

Each change in the water's condition, temperature, chemistry, or depth, left its mark as a distinct limestone bed, which formed as accumulations of plant and animal remains sank to the ocean floor. These accumulated deposits ultimately buried the Valley under several miles of ocean sediments.

#### The Land Rises

About 225 million years ago, the sea floor began rising slowly in response to thermal nudges from the large swirling currents in the molten lake deep below the Earth's crust. As these slow- moving currents pushed against the thin skin of the hard surface crust, it yielded to the gargantuan pressures. As the crust shifted, large pieces called "plates" moved en masse.

Some plates, composed of lightweight silica-rich rock, floated to the surface during the earliest days of the Earth's history. This light colored silicate scum formed the continents and contains the oldest rocks on Earth. The plates of the sea floor, on the other hand, are dark and heavy. When the plates move toward one another the heavy plates of the sea floor are forced under the lighter-weight continental plates. This caused the surface of the land to buckle and to be forced upward, which happened when the oceanic plate to the west of North America moved obliquely against the continent. These powerful forces lifted the land west of the Valley.

As the land rose and the water became progressively shallower, fine muds were washed in from the emerging areas of land. The ocean floor, formerly blanketed by shells and deposits of lime, became more muddy and sandy. As the water became shallower, it became increasingly susceptible to rapid changes in temperature and salinity. Waves and currents often roiled the shallow bottom, which caused those plants and animals adapted to deeper water to give way to worms and clams that favored the growing sandy conditions.

Once There Was A Forest

About 150 million years ago, during the age of dinosaurs, a forest of primitive evergreen trees called Araucarian pines grew several miles outside the Valley along the edge of the sea. Several species of *Araucaria*, the best known of which is the monkey puzzle tree, can still be found growing in South America, Australia, and other places south of the equator.

Storms and floods carried branches and whole stems of these trees into the ocean. As trees became waterlogged and sank to the ocean floor they were buried by hundreds to thousands of feet of mud and sand. Here, in secret, the woody materials were slowly altered molecule by molecule and replaced by silica, quartz, and other minerals until the tree had been turned to stone in an almost -exact replica of its original design.

#### Then Came The Sand

The sea eventually retreated from the area totally to be replaced by sluggish streams that deposited veneers of coarser sand on the mudflats. Occasional torrential rains, which caused flooding in the stream channels, washed coarser gravels from distant highlands onto the mudflats.

Beginning about 140 million years ago, mud and sand took over from the sea and reigned nearly 75 million years, during which time the Valley's limestones were covered to a depth of about 4,500 feet. Carried by winds from the erosion of distant highlands, masses of lofty, shifting dunes, sometimes thousands of feet high, piled up in the Valley. Over time the grains of sand became cemented together with iron to form "fossil" dunes (called the Aztec Sandstone) almost a half-mile thick.

#### And The Mountains Rose

Then, about 100 million years ago, as the sea-floor plate that lay beneath the Pacific Ocean to the west of the North American continent moved directly against the continent, the heavy oceanic plate was forced below North America. It created titanic forces as it crashed against North America in its resistance to being pushed under the continent. As the sea-floor plate moved beneath the continental plate, it melted and injected its lighter-weight components upward into the continent.

The Sierra Nevada Mountains thus began to form as gigantic intrusions of molten rock forced their way up into the Earth's crust, shoving aside the existing continental rock. The rise of the Sierra Nevada Mountains not only began to trap moisture on the mountains' western slopes, which caused the region east of the mountains to become increasingly dry, but also closed southern Nevada's outlet to the sea some 25 million years ago. Since then, erosion has been the dominant geological activity in the Valley.

The Rocks of Today

The magnificent rock formations in the Valley today have been created largely by the fracturing of the Aztec Sandstone. Although some fractures are a result of movement within the Earth, others in old brittle sand dunes happened without the Earth's movement. The vertical faces of many of the cliffs are the result of the collapse of sandstone blocks along vertical cracks as that last grain of sand gave way to the pull of gravity.

Chemical erosion has altered the original materials and has created brilliant colors. The rusting of iron has created deep red sandstones; in turn, the leaching of the rust has created white ones. And the mixing of all shades on the palette of chemical change has resulted in bands of pink, lavender, burgundy, purple, gray, yellow, and green to name a few.

The surfaces of some rock faces are coated with a black substance called "desert varnish," which is a result of chemical action perhaps modified further by microscopic plants. Leached from the rock by movement of water, iron and manganese are deposited on the rock's surface as water emerges and evaporates over thousands of years. These blackened surfaces were favored as ideal sites for the carved picture writing of the Valley's first inhabitants.

Both groundwater and rainwater are constantly dissolving the cement between the grains of sand that compose the Aztec Sandstone. Due to differences in permeability, the original process of cementing the grains together was discontinuous and irregular. As a consequence, some parts of the sandstone are more loosely packed and more readily eroded by water making domes, arches, and rock chimneys, in addition to potholes and hollows in the stone that are used as refuge by birds, mice, and desert woodrats.

As the sandstone was cemented together one grain at a time, it's not surprising that it's dissolving in the same way. Today, the grains of sand released from their millennial bondage once again blow across the desert, forming little dunes.

Water dissolves minerals and redistributes them, it freezes and thaws with its wedging effect that causes cracks to grow. Raindrops pound the rock and soil, and the awesome power of flash floods give water more importance than wind as a force of erosion.

Nevertheless, windblown sand changes the Valley as it polishes stones and distributes and redistributes fine particles of sand, heaping them into small dunes on the lee sides of vegetation and ridges. Other surfaces are swept clean of all sand, leaving them covered with a coating of gravel known as "desert pavement."

The Indigenous Peoples of the Valley

Lost in the eons of the past is the moment when the first humans entered the Valley during the latter part of the great ice age, some eleven thousand years ago. Although the great ice sheets didn't reach the Valley, cool moistureladened winds from the melting glaciers blew southward into the Valley, which was a profusion of vegetation and flowing streams of cool water. Herds of deer, elk, and antelope grazed in the Valley along with horse, camels, and a close relative of the present-day mountain goat. And there were ground sloths along the streams' margins and giant beavers within their waters. One of the main predators was a large doglike animal call a dire wolf.

Other humans existed in the Valley four thousand years ago, during a time when the climate was cooler and wetter then today and bighorn sheep were abundant. From 2,000 B.C. to 300 B.C. the Valley was occupied by people organized into small groups called nuclear families, each consisting of two to four men who, with their wives and children, wandered amongst their favorite hunting areas.

The men, using spears and atlatls, hunted bighorn sheep, the most important source of food. The women and children caught rabbits, hares, tortoises, and other reptiles and collected and prepared plants to supplement their diet of sheep. After the bighorn population declined from over-hunting or became wary of the hunters, the families abandoned their camps only to return as the sheep once again repopulated the area. During time of good hunting and leisure, these people created elaborate artistic designs (called petroglyphs) on some of the rock faces by carefully pecking into the black desert varnish on the surface of the sandstone.

As the population of humans increased, the climate became warmer and drier, gradually forcing the culture to adapt to the changing conditions. Between 300 B.C. and 700 A.D. food was too scare in the Valley to permit long periods of occupancy, so the people settled in the valleys of the Virgin and Muddy rivers outside the Valley of Fire. Even here, hunters, formerly dependent mainly on bighorn sheep, had to pursue such small game as rabbits, hares, ground squirrels, lizards, snakes, and birds to augment their kill of desert bighorn sheep and mule deer. The atlatl, still in use during the early part of this period, was eventually replaced with the bow and arrow, which was easier to carry, more accurate, and allowed repeated shots within a short time.

Gathering seeds, tubers, and berries became increasingly important in maintaining subsistence as did the peoples' reliance on the streamside areas where the plants grew. With increasing dependence on plant food, risks of survival lessened, and the population grew, placing an ever-increasing pressure on the fragile environment, forcing the people to move to less productive areas.

At some point during this period, farming was brought to the area by people migrating northward from Mexico. These migrants were called the Anasazi (Ah-nah-SAH-zee), a Navajo word meaning "ancient ones." These early Anasazi people, often referred to as the Basket Makers, began to cultivate corn, squash, and beans near their villages along the riparian bottomlands of the Virgin and Muddy rivers and to store food in the event of lean times.

Around 300 A.D. the Anasazi learned how to use clay to make sun-dried cook-

ware, a technique that was gradually refined into the making of pottery. Pottery making became an art that played an important part in transforming the culture of the growing Anasazi population into a more highly-organized ritualized society.

Somewhere around 700 A.D. the Anasazi discovered they were not alone; the Lower Colorado Yuman people migrated into the area from the south, and about 900 A.D. the Numic people, the Paiutes, also migrated into the area. As economic competition grew between these diverse people, the climatic conditions became even hotter and drier. The Anasazi abandoned the region around 1150 A.D., which left the area, including the Valley of Fire, to the Southern Paiute culture.

The Paiutes had already adapted to the desert, and unfettered by the ties of extensive farming and village life, lived in close ecological balance with their surroundings. The Paiutes' population was low as small family groups lived a nomadic life of hunting and gathering, following the seasonal harvests from one place to another.

The Valley, with its wide altitudinal range, was ideally suited for the seasonal use of Paiutes. The season of greatest use was probably in the spring, when water would gather and remain in depressions in the rocks and edible plants would be in greatest abundance.

The Paiutes believed that the land would supply their needs, and with their simple but efficient technology and hard work, the land did indeed grant them an adequate lifestyle. They were conscious of and dependent on Nature's cycles. They didn't seek to conquer the desert, for they neither considered that they owned it nor that Nature was their enemy. Their way of life was thus harmonious with their environment and they asked from the land only that which it could supply. So in the end it was the Paiute that the Europeans found living in the Valley, when they first entered the area.

#### Europeans Arrive

The first European to reach what is now southern Nevada was Francisco Garces in 1776. Few followed until half a century later when Jedediah Smith, the famous mountain man, led the first party of fur trappers along the Virgin River in 1826. During the 1830s and 1840s traders and travelers from Santa Fe followed Smith's route, known as the Spanish Trail, along the Virgin River. Kit Carson traveled the area several times in the 1840s.

The number of travelers increased greatly in the late 1840s. The old Spanish Trail, which had been used mostly by pack trains, gave way to new immigrants coming via Salt Lake City on their way to California. The trail from Salt Lake City became the Mormon Road and was used mostly by wagon trains, remaining the primary route through the region until the San Pedro, Los Angeles, and Salt

Lake Railroad replaced it in 1905.

The sudden, intrusive arrival of the European culture was traumatic to the Paiutes. Although there were occasional hostilities between the invaders and the Paiutes, often over the ownership of animals, the most devastating effect on the Paiutes was the Europeans' belief in private property.

Beginning in 1864, settlers arrived along the Muddy and Virgin rivers and simply evicted the Paiutes from their own land. They took away from the Paiutes their most productive riparian environments and then diverted water from the rivers and springs for intensive irrigation of agricultural crops, and in so doing destroyed the Paiutes' way of life.

In addition, the settlers felled for fuel and timbers for mining operations the pinon pine forests on which the Paiutes relied for food. And they introduced vast numbers of grazing livestock that destroyed the Paiutes' food and medicinal plants, as well as European diseases that all but decimated the Paiutes.

In 1872, their culture destroyed, the Paiutes were forced onto the Moapa Indian Reservation, which consists of about 72,000 acres along the Muddy River. Little of the Paiutes' material culture survives, but they still take pride in their indigenous philosophies and attitudes.

The Valley of Fire was established as Nevada's first state park in 1935 and is the largest in state.

#### Zane and I Enter The Valley of Fire

Zane and I first see the Valley of Fire in May 1990, and we're instantly captivated by some mystical sense that seems to emanate from the rocks, an ancient remembering hanging like a cloak in the air. Is it the endlessness of time or that the past seems somehow linked to the present? Is it that voices of olden times whisper in the desert wind? It's nothing we can explain or define, but over the next two years we're drawn repeatedly to the Valley. And always the Valley offers us a sense of ancient spirits gathered to share our little secretive fires amidst the boulders fallen from the long red mountain of Aztec Sandstone that looks like a dinosaur's naked spine protruding above the floor of the surrounding desert.

Each time we go to the Valley we see a different snapshot in the march of millennia. A moment earlier the scene's different in some tiny hidden way, and in the next instant it's different again. The only constant is change, and for a while we're part of it.

We share the Valley with desert woodrats whose collections of sticks and old bones fill special crevices in the rocks. We visit with tarantulas, white-tailed antelope ground squirrels, and black-tailed jackrabbits. We talk to lizards sunning themselves or as they scamper out of our way. Canyon wrens and desert sparrows sing for us and ravens call as they fly overhead. We find multicolored petrified wood, including whole trunks of the Araucarian pines, whose sides have little troves of minute crystals sparkling in the sun, and we see rocks whose rough gray bodies guard fossil seashells, corals, sponges, and sea lilies from the time when the Valley was a watery world ocean teeming with life.

To us the Valley is alive. The winds of winter blow cold as we walked bundled up amidst ever-changing stream channels, exploring the nooks and crannies of giant boulders with their ghostly sculpted faces, and poke around the edges of the Dinosaur's Backbone.

We find snug hollows amidst the boulders where we collect the faded stalks of last spring's grasses and the long-dead wood of creosote bush, cat's claw, and Mormon tea to feed our little fires. Here, protected by boulder sentinels and warmed by dancing flames, we lose ourselves in the wispy plumes of whirling smoke that tell stories of other fires warming other people in a far and distant time. Here, far from the noise, greed, and pollution of Las Vegas, we eat our lunch and for a moment renew our bond with the Earth and with those who went before us into the Valley.

With the birth of spring comes the bright green of new grasses and the delicate hues of desert flowers that smile at us briefly and are gone: the yellows of mustard, desert gold, and evening primrose, the lavender and pink of sego lilies, the whites and blues of desert poppy and astragalus, the oranges of desert mallow and California poppy, and the hotpink of beaver-tailed cactus. Everywhere life is bursting - from the songs of birds and the whinings and buzzings of insects to the seemingly timeless miniature gardens of gray, lavender, orange, yellow, and chartreuse lichens that grow almost imperceptibly over the centuries to cover the rocks with a splendid array of brilliant color.

Occasional spring rains fill the long-empty stream channels with rushing torrents that are here and gone in a wink and in their passing soften the soil with moisture. Despite the water's hurry, potholes in the channels' rocks hold water for a time in quiet pools, a reprieve from the drying winds of a thirsty land. Here, in the magic of the moment, we cool our feet after a long day's walk over sand and rock. Here, too, are strange little flies resting on the water's surface only to be blown hither and yon by playful breezes that murmur of days gone by, of today, and of days yet to come as they waltzed over the desert floor creating swirls of dust in their passing.

By early May, the sun's intensity increases appreciably and our view of the Valley becomes surrealistic, shimmering in the day's growing heat. Now the name, "Valley of Fire," takes on a meaning apart from the red of the Aztec Sandstone, and our visitations ceased until late autumn.

We're drawn again and again to the private little enclaves created and protected by the giant boulders' massive arms at the base of the sheer cliffs along the flank of the Dinosaur's Backbone. The area's grip is irresistible. So it isn't until the spring of 1992 that we venture into a vastly different part of the Valley.

The area we find this spring is a gentler terrain of sweeping vistas that encompass meandering stream channels and low flat beds of sandstone with streaks of lavender, pink, gray, yellow, and purple coursing through them only to vanish in the distance towards the Colorado River. In other directions are tilted beds of red and white sandstones with intermittent hills and ridges of red, white, lavender, gray, pink, and purple. And everywhere are blooming flowers ministered by butterflies.

Here we enjoy sands of various colors - sands millions of years old. As I look at grain after grain under a magnifying glass, I see the whole kaleidoscopic tumble of history reflected in each grain from the beginning of the world until now. And here we rest under a lone cottonwood tree growing out of a dry streambed of apricot-colored sand flowing toward a larger streambed in which two deep pothole pools act as aquatic nurseries for the tadpoles of the redspotted desert toad.

Although we don't spend as much time in this part of the Valley because we discover it so late, this land of rainbow sandstones and open space is somehow gentler, softer, and more feminine than the land of the Dinosaur's Backbone, and it has a powerful effect on us. We share it the large desert iguana and desert horned lizard, as well the gridiron-tailed lizard, canyon wrens, ravens, swallows, swifts, black-tailed jackrabbits, and coyotes. And it's only here that we see the distinctive tracks of the sidewinder, a small rattlesnake living in the sandy areas.

On 13th of May 1992 we go to the Valley for the last time to say farewell to the spirits of rock and land, of plant and animal, and of those people who went before us into the Valley. We reach the Valley early in the morning and are greeted by four animals we'd never before seen: a red racer, which is a very fast, slender snake; a Mojave rattlesnake; a Gila monster, one of only two poisonous lizards in the world; and two desert bighorn sheep. In addition, we see a desert horned lizard and a raven or two, and from the rocky knobs comes the liquid laughing song of the canyon wren.

So as we bid farewell to the Valley of Fire, we thank it for being our spiritual sanctuary and for giving us a sense of place during our stay in city of Las Vegas. The Valley in turn gives us a gift of memorable splendor. It shares with us encounters with some of its denizens we've never before seen and sends us away with the laugh of the canyon wren in our hearts. What more could we ask?

# References

 $^{\ast}$  Clark, W.D. 1981. Death Valley, the story behind the scenery. KC Publ., Las Vegas, NV. 45 pp.

#### Citation Format

<sup>\*</sup> Fiero, G.W. 1988. Nevada's Valley of Fire, KC Publ., Las Vegas, NV. 46 pp.