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American Buddhist Response to the Land: Ecological Practice at Two West Coast Retreat Centers¹

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From a theoretical perspective, Buddhist philosophy appears to be highly congruent with an ecological worldview. Respected Buddhist teachers such as His Holiness the Dalai Lama and Vietnamese Zen master Thich Nhat Hanh frequently point to the interdependence of human life and the environment.² American Buddhist scholars, including many of those in this volume, show the bases in text and principle for a Buddhist environmental philosophy.³ But how do these links translate into actual practice? Do American Buddhists “walk their talk”?

In this article I look at two American Buddhist centers to assess the extent of ecological practice at an institutional level. Retreat centers act as focal points for transmitting Buddhist values both to committed Buddhist practitioners and to the visiting public. To the extent that practice places reinforce ecological caretaking with spiritual principles, they provide a foundation for moral commitment to the environment. It is clear to many leading environmental thinkers that science, technology, and economics alone will not solve the environmental crisis.⁴ Instead, they call for cultural transformation based on religious, moral, or spiritual values of deep care of and concern for the earth. How do American Buddhist centers contribute to this cultural shift? What in their efforts is distinctly Buddhist and what reflects the existing culture or reaction to it? Where are the points of tension around ecological practice in Buddhist centers? And on what institutional elements do these practices depend?

This article is a preliminary report of work in progress assessing environmental practices at diverse American Buddhist centers in the United States. The first two centers I have looked at are Green Gulch Zen Center, north of San Francisco, and Spirit Rock Meditation Center near San Rafael, in Marin County, California. Both are rural centers responsible for sizable portions of land. Though each has been established relatively recently, each has made some efforts toward appropriate land stewardship practices. I provide a brief land history of each center and a comparison of their similarities and differences. Information is drawn from center newsletters and journals, site visits, and interviews with staff members. I review the centers' current land practices in the context of Gary Snyder's core ethical guidelines for reinhabitation. I describe some points of tension and arenas for further ethical exploration. Much of what is reported here represents a dialogue unfolding. This paper itself may prompt further discussion and commitment toward turning the *Dharma* wheel another round.

Land Histories

Green Gulch Zen Center lies in a beautiful coastal valley in the narrow flood plain of Green Gulch Creek, just north of San Francisco. The land extends almost to the Pacific Ocean at Muir Beach and is surrounded by the public open space of Golden Gate National Recreation Area; nearby lands are protected by Mount Tamalpais State Park and Marin County Water District. The valley is flanked on the north and south by open, grass-covered ridges; remnants of redwood forest understory line the side canyons. In the next valley over lies Muir Woods National Monument, home to some of the tallest coast redwoods in the San Francisco Bay area.

Green Gulch Farm was purchased in 1972 from owner and rancher George Wheelwright ten years after San Francisco Zen Center was formally incorporated. Bay area Zen students had begun sitting with Shunryu Suzuki Rōshi in 1959 when he arrived at Sokoji Temple on Bush Street in Japantown. By 1966 Zen Center had become a stable practice community and Suzuki Rōshi was interested in finding rural land for a retreat center. With exuberant fundraising efforts (including generous rock and roll benefits), in

1967 Zen Center bought Tassajara Mountain Center, a former hot springs resort in the Big Sur area. Soon after, Zen Center moved from Sokoji to a new city facility on Page Street, which Suzuki named Hoshinji, Beginners' Mind Temple.⁵ Zen Center gained national publicity with the publication of Suzuki Rōshi's book, *Zen Mind, Beginners' Mind*, and, shortly after, Edward Espe Brown's *The Tassajara Bread Book*.⁶

Suzuki Rōshi's health began to deteriorate in 1971; before his death he suggested the idea of a farm practice place. The following year his *dharma* heir Richard Baker took the lead in orchestrating Zen Center's purchase of Green Gulch Farm, which became Green Dragon Temple. George and Hope Wheelwright had owned the land for thirty years, long before the coast highway was built, when Muir Beach was a small village of Portuguese fishermen. George raised cattle there, including award-winning prize bulls. To improve pasturage for his cattle, he sprayed 2-4D herbicide on the hills to limit shrub growth. The creek was channeled to produce a series of reservoirs for water storage. The land still bears tracks of cattle trails; the creek passes through a concrete ditch for much of the stretch through the valley.⁷

Compared with the wooded side canyons of neighboring Franks Valley, Green Gulch was heavily cut over after the San Francisco 1906 earthquake. Many redwoods and Douglas firs were transported out of Big Lagoon dock at Muir Beach to help rebuild the city. To reforest the lower valley, Wheelwright planted lines of non-native eucalyptus along the entrance road. When Zen Center became the Green Gulch land steward, students undertook significant efforts to build a twenty-acre organic farm and a one-acre organic garden. To protect and restore the land, they planted windbreaks of Monterey cypress and Monterey pine between the agricultural fields. Since 1975 tree plantings have been carried out yearly and non-native invasive plants (acacia, broom, ivy) have been culled back. Field soils have been improved by large-scale compost-making and legume cover crops. The farm grows and markets certified organic lettuce, squash, pumpkins, potatoes, and kitchen greens. The garden supports a variety of perennial dahlias, Siberian iris, and roses, along with annuals such as sweet pea, anemone, larkspur, and Peruvian lilies. In the greenhouses flowers, vegetables, and native plants are propagated for community and private gardeners.⁸

Spirit Rock Meditation Center lies in San Geronimo Valley, a connecting link between the urban corridor of San Rafael, north of San Francisco, and the open space of Point Reyes National Seashore and Samuel B. Taylor State Park. The valley is relatively sparsely settled, remaining in rural ranchlands and dairy farms. Intensive development pressure has been held at bay due to the fiercely protective conservation and planning efforts of the San Geronimo Valley Planning Group. The center is named for a prominent outcrop of rock thought to be sacred to the local Miwok tribes. Rising up behind Spirit Rock lie rolling grassy foothills graced by scattered coast live oaks and bay laurels.

In the 1960s a number of Western students traveled to Southeast Asia to study *vipassanā*, or insight meditation practice. In the 1970s they returned home and began teaching at various retreat centers, including Naropa Institute in Boulder, Colorado. On the East Coast, in 1976 a group of senior students and teachers led by Jack Kornfeld and Joseph Goldstein purchased a Catholic seminary in Barre, Massachusetts, and established the Insight Meditation Society as a permanent retreat center. On the West Coast, interest in *vipassanā* practice grew with the national publication of the *Inquiring Mind* newsletter and an increasing number of retreats at various local centers (including Green Gulch). In 1983 a small group of Californians began meeting regularly to consider establishing a retreat center on the West Coast. Three years later, Jack Kornfeld found a four hundred-acre parcel in San Geronimo Valley for sale by The Nature Conservancy, which wanted to contribute the purchase money to Amazon rain forest preservation. The land seemed ideally suited to their purposes—classes, daylong retreats, staff housing. After extended negotiations with the landowners as well as representatives of the San Geronimo Valley Planning Group, the deal was closed.⁹

This land, in contrast to Green Gulch Farm, was undeveloped, with few previous buildings. Ongoing fundraising has generated enough support to build the necessary infrastructure for hosting regular retreats. Several temporary trailers were installed in 1990 to house a meditation hall and office. In 1995 a dining hall was built so meals could be served on the premises. Future design plans include four residence halls for eighty-four retreatants, a larger meditation hall to seat two hundred, staff housing for twenty resident

staff, additional parking areas, a family program building, four family apartments, teacher housing, a Council House with meeting rooms, and an adjacent hermitage with eighteen private huts, a small meditation hall, and two teacher rooms. In early 1996 the plan received approval from Marin County Department of Public Works and all other necessary official agencies. The next building phase is expected to begin soon.¹⁰

A brief comparison of these two rural Buddhist centers shows a number of strong similarities and differences that are significant in the evolution of ecological culture and values at each place. Both sites are physically part of the larger landscape system surrounding Mount Tamalpais, a prominent local peak extending to 2,571 feet. The mountain is flanked by Douglas fir and redwood forest, coastal scrub, serpentine outcrops, and luxuriant moss-lined creeks. Green Gulch lies at the base of the southwest-facing slope; Spirit Rock lies below the northeast-facing flank. The distance between the two centers is a long day-hike of twenty-two miles over the edge of the mountain. The centers draw their primary vertical reference point from the mountain, a beloved landmark in northern San Francisco matched by the taller Mount Diablo east of Oakland.

Both sites lie in affluent Marin County, an area with a strong conservation history and a well-established plan to limit development to the highway corridor along the San Francisco Bay. The western two-thirds of the county has been protected as open space, due to the tireless efforts of the Marin Conservation Association and others over the last seventy years. This relatively pristine open space is a magnet for hikers, joggers, mountain bikers, and sightseers from not only the nine-county-wide Bay area but the entire United States as well. The connecting national and state parks offer over two hundred miles of hiking trails, mountain views, and majestic stretches of open beach. Before either Buddhist center was established, the land itself was a spiritual draw for thousands of people.

Visitors and students to Green Gulch and Spirit Rock frequently express their appreciation for the beauty of the rural country settings of these retreat centers. They come for the Buddhist teachings, but they also spend time walking in the garden, on the beach, or across the hills. The landscape itself is spiritually inspiring and is seen as part of the meditative experience. Teaching in both centers takes place outdoors as well as in the meditation hall—in particular,

instruction in walking meditation. Through one or many visits to Green Gulch or Spirit Rock, practitioners come to associate their experience with the *dharma* as connected to these specific pieces of land.

The differences between the two centers are also significant. Though both are surrounded by large vistas of open space, almost all of the Green Gulch landscape is held in public trust, whereas neighboring land at Spirit Rock is private property. For Green Gulch, good neighbor relations require ongoing cooperation and negotiation with primarily public agencies; for Spirit Rock these are with private landholders. Though both centers are located in Marin County, the two microclimates are quite different. Green Gulch, on the coast, has somewhat milder winters and much foggier summers. Spirit Rock, in an inland valley, experiences more temperature extremes and is more subject to fire hazard in the fall dry season.

Green Gulch inherited its main buildings from the Wheelwrights and adapted them to retreat center use despite existing flaws. For example, the meditation hall, formerly the cattle and horse barn, has lovely high ceilings and a thick wood floor, but because it was built over the original creekbed, it retains a certain dampness through the winter. Spirit Rock has been able to design site-appropriate buildings from the start, drawing on state-of-the-art environmental design principles wherever possible. Green Gulch has committed twenty acres to organic farming and gardening, with all the related challenges of soil building, water management, marketing, and integration with other Zen Center activities. Spirit Rock has no organic farm or garden and no plans for anything on this scale other than minor landscape plantings.

Perhaps most significant of all, Green Gulch has been a residential center from the start. Those who live there perceive it to be their home; Sunday guests and retreatants are visitors with relatively little influence. Decision-making power for the land is in the hands of the staff, the board of directors, and, to some extent, the stewardship committee. Almost all the members of the two governing bodies and volunteer committee are or have been residents at one of the Zen Center sites. In contrast, Spirit Rock has never been residential, except for minimal caretaking, and will not be for several more years. Fundraising for even the land purchase depended on extensive lay involvement and volunteer activity beyond that of the very

limited staff.¹¹ This difference in governance has shaped the way land relations have evolved in each center, according to the number and seniority of those responsible for land-management decisions.

Ethics of Ecological Living: Toward Reinhabitation

Frameworks for environmental ethics can be based on a number of different principles.¹² For example, Holmes Rolston III enumerates human ways of valuing nature (economic, scientific, recreational, aesthetic, sacramental) in contrast to the intrinsic value of organisms, landforms, and so on—"for what it is in itself."¹³ One could evaluate religious centers according to which values they promote and how these preferences are reflected in spiritual practices. Ecofeminist Valerie Plumwood frames human relations with nature in the context of social power relations and the perpetuation of oppressive dualisms.¹⁴ One could evaluate religious centers as to the degree they reproduce cultural hierarchical attitudes toward nature. Conservation biologists Reed Noss and Edward Grumbine, among others, set forth ethical principles based on protecting and enhancing biodiversity.¹⁵ Ecophilosopher David Abram suggests guidelines based in reciprocal sensory communication with the "more than human" world.¹⁶ Each framework offers a radically different lens through which to consider cultural practices.

For the purposes of this assessment, I am interested in the transmission of ecological culture. I want to see how religious institutions use spiritual principles to support ecologically sustainable ways of life. In his classic essay, "The Land Ethic," Aldo Leopold, the wildlife biologist of the 1930s and 1940s, defines ethics as "a kind of community instinct in the making." For Leopold, all ethics rest upon the premise that "the individual is a member of a community of interdependent parts":

The land ethic. . .enlarges the boundaries of the community to include soils, waters, plants, and animals, or collectively: the land. . . . In short, a land ethic changes the role of *Homo sapiens* from conqueror of the land community to plain member and citizen of it.¹⁷

As people live on the land over time, they become part of the land, the land comes to include them. They no longer live *on* the land

but rather *with* the land and all its members. Here I explore the proposal that institutional practices (as opposed to individual isolated practices) reflect the evolution of a community instinct in the making.

Gary Snyder suggests that a useful orientation for an ecological community instinct would be "reinhabitation" as an ecosystem-based culture. He refers to biogeographer Ray Dasmann's distinction between *ecosystem cultures* whose "life and economics are centered in terms of natural regions and watershed" and *biosphere cultures* that are directed from urban centers and oriented to global use and plunder of natural resources.¹⁸ Native and rural peoples are almost entirely ecosystem-based cultures, generally having less impact on the health of the surrounding system than biosphere cultures. *Reinhabitory peoples* are those who are committed to a life based in place, "making common cause" with the life-styles of the original inhabitory peoples.¹⁹ This means a life identified with a specific place, understanding the local community of plants and animals as companions, neighbors, and supporters of human life. Over time, this sense of place deepens with familiarity, and place-based knowledge is passed on from generation to generation.

Snyder suggests three aspects that are the core of the practice of a reinhabitory ecological ethic: "feeling gratitude to it all; taking responsibility for your own acts; keeping contact with the sources of the energy that flow into your own life (namely dirt, water, flesh)."²⁰ On the surface this seems to be deceptively simple, yet the implications are very broad and particularly suited to a review of religious centers. As Snyder puts it, "the actual demands of a life committed to a place. . . are so physically and intellectually intense that it is a moral and spiritual choice as well."²¹ He suggests that to survive as an ecosystem person, one must draw on moral and spiritual resources. These are strengthened through knowledge of place and, reciprocally, through knowledge of self as dependent on place.

The first of these three aspects, "feeling gratitude," generates humility and a sense of awareness of the wider self. Mixed in are awe, caution, fear, and common sense. Prayers of thanks are offered for the gift of life, for freedom, for the moment, from the death-dealing forces of nature. Reinhabitants remember that human lives

are dependent on other lives, that nothing lasts forever, that no food, water, or shelter are ever guaranteed. The practice of gratitude in a Buddhist context carries understandings of no-self, impermanence, and interdependence.

The second aspect, "taking responsibility for your own acts," implies the exercise of restraint, recognizing the rippling effects of each action in the jeweled net of Indra.²² The practice of acting responsibly means minimizing destructive human impact on the land and allowing room for the flourishing of nonhuman others. Contained in this practice are the Buddhist precepts for self-restraint, including no killing and no abusive relationships.²³

The third aspect, "keeping contact with the sources of energy . . . flow," may be the most subtle and easily overlooked. Snyder is speaking of "wild mind," the original source energy, and the need always to be nourished directly by this primordial wisdom. This is the energy shared with other life-forms, the force of weather, place, and history commingled. An individual at a Buddhist center may contact this energy through walking meditation, gardening work practice, or mindful food preparation. But how does an institution maintain contact with wild mind in its structures and organizational culture? I suggest that in addressing this challenge Buddhist retreat centers begin to approach reinhabitation, allowing the land to influence local ecological practice significantly. The three elements of Snyder's ethic describe a method for transmission of ecological culture on American soil. This look at two Buddhist centers can provide a preliminary assessment of the degree to which these "new settlers" may be headed toward long-term reinhabitation.

Evaluation of Two Buddhist Centers

Green Gulch Zen Center

Looking first at Green Gulch Zen Center, I will begin by examining practices of *gratitude to the land*. These are usually mixed in with gratitude for the Buddha, *Dharma*, and *Saṅgha* (the Three Jewels) to various degrees, but certain practices specifically highlight relationship with and dependence on the land. On a daily basis, students recite the Zen meal chant:

Innumerable labors brought us this food
We should know how it comes to us
Receiving this offering let us consider whether our virtue or practice
deserve it
Desiring the natural order of mind, let us be free from greed, hate,
and delusion
We eat to support life and to practice the way of Buddha.²⁴

For Zen students at Green Gulch, the innumerable labors are obvious: moving irrigation pipes, cropping salad greens, propagating greenhouse seedlings, turning compost. The meal chant is a regular reminder to offer gratitude for the food upon which they depend.

Across the course of the seasonal year, dedication *ekos* are offered at the four turning points of the year. At the spring equinox service outside on the east-facing side of the valley, gratitude is offered on behalf of the community for the rising sun of the new year. On the summer solstice, at mid-day, gratitude is offered for the bountiful garden and the produce of the fields. The autumn equinox dedication is offered at dusk, facing west, accepting the teachings of impermanence and death. And the winter solstice is marked at midnight under the dark sky, with gratitude for the vast wild mind of no-self.²⁵

In addition to these natural points of the sun's shifting motion across the ridges, Green Gulch Zen Center also marks the bounty of the farm harvest at Thanksgiving. *Zendo* and dining-room altars are decorated with offerings of beets, pumpkins, lettuce, chard, herbs, and potatoes and the *Heart Sūtra* is chanted with gratitude for the riches of the land. On Buddha's birthday in April, children collect representative flowers of each of the wild species in the watershed and add them to the elephant flower cart for bathing the baby Buddha. The dedication chant at this ceremony lists all the flowers (over one hundred!) in a long, entertaining drone, occasionally marked by the further amusement of Latin names. In the repetition is the transmission of gratitude for the wild hills and diversity of flowers.²⁶

The second aspect of Snyder's ecological ethic, *taking responsibility* for one's acts, is a complicated undertaking at a rural center such as Green Gulch. I will report on previous and current efforts, but certainly much more can be done to act fully responsible on this ecologically complex piece of land. I will describe institutional

efforts to take responsibility in four arenas: land stewardship, community relations, ecological culture, and education.

Land stewardship activities focus primarily around two areas: land restoration efforts and the organic farm. Some of the restoration efforts take the form of doing nothing, allowing the wild mind of the coastal habitats to surface again. The hills are no longer sprayed with herbicides to control vegetation, and cattle no longer trample the soil. Along the creek, a thicket of shrubs has been left to grow into a healthy wildlife corridor, well populated by local songbirds. Of the more proactive restoration efforts, annual tree plantings on Arbor Day in February have been carried out since 1975. Wind-breaks of Monterey cypress and Monterey pine are now easily fifty feet tall and play a significant role in deflecting the powerful ocean winds that ravage the coastal soils. Since 1991, in addition to plantings of redwood and Douglas fir, coast live oak acorns gathered from the neighboring valley have been planted on protected sites to replace those grazed down by the cattle.²⁷ Though somewhat controversial, staff and volunteers have also made an effort to remove non-native eucalyptus shoots, acacia, German ivy, and broom where they are choking back native vegetation. A preliminary landscape ecology report was drawn up in 1991 with detailed recommendations for further tree work and land restoration.²⁸ Forward motion is restricted by the lack of a staff person designated as Land Manager. Though positions exist for Head of Farm and Head Gardener, as well as Head Maintenance, no one staff person assumes responsibility for the overall health of the landscape ecosystem.

The twenty-six-acre organic farm is a model of good farming stewardship and is recognized throughout the state for its ecological practices. It is a certified member of the California Organic Farming Association, meeting the standards for soil free of pesticides and chemical fertilizers. Heavy machine use is moderate, primarily for plowing the fields and transplanting seedlings. Weeding and cropping are done by hand as part of mindfulness work for Zen students. The soil is built through careful application of compost made from kitchen scraps, green waste, and horse manure; a cover crop of fava beans is planted each winter and turned under as green manure in spring. Insect pests and diseases are managed through observation, crop rotation, and selected organic and mechanical pest

controls.²⁹ Because it is accountable to the standard-setting association for organic produce as well as to the community of organic farmers in the wider Bay area, the Zen community at Green Gulch has an incentive to maintain a high degree of institutional responsibility for its actions. Likewise, the one-and-a-half-acre perennial garden is organic, with all cultivation in double-dug beds and all cropping done by hand.

Community relations regarding the land require ongoing conversations with Muir Beach residents and staff of the Golden Gate National Recreation Area (GGNRA). With each, being a good neighbor means cooperating to share land and water resources, acknowledging the institutional impact of Zen Center. Green Gulch Creek empties into Redwood Creek near its mouth to the ocean at Muir Beach. In dry summers, the farm has drawn on these combined water supplies to irrigate the lower fields. Because water in coastal California is limited, rates of water use have been a source of conflict with the local community, other ranchers, and Muir Woods (a part of GGNRA). To maintain navigable levels of water for salmon in Redwood Creek through Muir Woods, and to share the remaining water with neighbors, Green Gulch has reduced tillage areas in dry years.³⁰

Relations with the GGNRA are also an ongoing part of Green Gulch institutional life. Staff have been asked to comment on plans for bike routes through Green Gulch, control of escaped South African capeweed, and restoration of Big Lagoon at Muir Beach. Over the years a strong relationship has developed between the garden staff at Green Gulch and the park rangers at Muir Woods, as they have cooperated in plant propagation and volunteer planting days together. GGNRA resource staff have been helpful in offering advice for land-management decisions at Green Gulch which affect the surrounding landscape.³¹

The farm and garden encourage community interaction through outreach projects with other farms and gardens. Seedlings and plant starts are often donated to other fledgling farms, such as the Hunter's Point jail project and Schoolyard Garden in Berkeley. Volunteers are encouraged to join farm staff for potato and pumpkin harvest days. Farm and garden staff often consult with other farm projects to offer advice on soil building, planting design, and propagation techniques.

By *ecological culture* I mean everyday activities which promote sound environmental habits. At Green Gulch three arenas reflect a high degree of institutional responsibility: food practices, waste recycling, and water use. As a Buddhist center, Green Gulch has chosen a policy of not cooking or serving meat in the dining hall. Though vegetarianism is often associated with Buddhism, it is not strictly mandated by the teachings. However, since Zen Center is committed to vegetarian practice, it does not support the often inhumane institutional practices associated with factory animal farming and animal slaughter. Further, by adhering to vegetarianism, the institution is not contributing to the accelerated clearing of global rain forests for cattle pasture and beef imports. Food served at Green Gulch includes as much in-season produce as possible from the organic farm. Other produce is purchased from local dairy and vegetable farms to support neighboring farmers. Though these aspects of Green Gulch food contribute to ecological responsibility for the land and for the regional economy, some residents urge even stronger ecological practices, such as serving *only* organic food.

Food waste goes into large compost piles adjacent to the farm and garden. After several months of "cooking" with green clippings and manure from the neighboring horse farm, the compost is ready to spread on the fields. Green Gulch also recycles white paper, magazines, glass and plastic bottles, cans, cardboard, motor oil, and batteries. The farm reuses wood and cardboard produce crates from regular customers by picking them up on produce runs; the garden reuses gallon pots and seedling trays for propagation. Paper towels, napkins, and toilet paper as well as most office paper purchases are from recycled paper sources. Fallen trees become firewood; trash lumber is used for kindling or is burned. Relatively little waste is hauled away from Green Gulch besides the recyclables. These efforts to simplify food and waste flows to and from the center are motivated both by the high cost of trash removal and the Zen aesthetic of tidiness.

Water conservation is mandatory at Green Gulch as water supplies are limited to local springs and Green Gulch Creek. These supply all the water needs year-round for the thirty to forty residents, ten to fifteen guest students, two to three hundred Sunday visitors, and additional conferences and retreats. Located in the highly developed San Francisco Bay region, Green Gulch is unusual in

being water self-sufficient. Its entire water system is self contained and locally maintained, drawing on five reservoirs, three storage tanks, and a well. The valley is not connected to the Marin County Water District for backup supplies of additional water, so water use is managed according to what is actually available. In summer and early fall, rates of flow drop significantly, bringing added pressure to conserve water. Low-flow toilets and showers are installed in the guest and residence areas; drip irrigation is used in some of the garden beds.³² During meditation retreats, frugal use of water is practiced in formal Japanese *oryoki* meals, where each person washes his or her bowls with less than a cup of water per meal. Water conservation depends on continual reminders to the ever-changing population of guests and staff, particularly during dry months.

Education for environmental awareness is an ongoing effort at Green Gulch Zen Center, spearheaded almost entirely by the garden staff. Farm and garden classes are offered year-round on composting, perennials, vegetable gardening, and other topics. Children's classes and other groups receive tours of the farm and garden, meditation hall, and residential buildings. For several years Green Gulch has hosted a "Voice of the Watershed" series of walks and guest lectures on topics of local natural history. Each year before Arbor Day, senior staff lead a ridge circumambulation of the valley to place the center in a larger landscape context. The 1992 summer practice period focused specifically on "Environment and Meditation," drawing together texts, teachers, and daily practice engaging environmental issues. One result was an educational pamphlet on "Environmental Practice at Green Gulch," a summary of institutional efforts to be environmentally conscious and responsible.³³ Although various staff and students have carried these efforts forward, environmental concerns are not yet considered a top priority by those in leadership positions.

Through each of these four areas—land stewardship, community relations, ecological culture, and education—Green Gulch has made some effort to systematize an ecological ethic of taking institutional responsibility for the center's actions. This is no guarantee that each individual who passes through Green Gulch receives the spark of this ethic, but at least while they are visiting, they are expected to follow the established environmental practices of the local culture.

The third aspect of Gary Snyder's ecological ethic entails *keeping contact with the sources of energy* that flow into one's life, in this case, the life of Zen Center. This is perhaps the least easy to enumerate of the three elements of the ethic, and yet it is most crucial to the vitality of Snyder's framework. Individual Zen students report gaining access to this energy flow through working in the garden, sitting among the redwoods, or walking by the ocean. But these receptive activities are seldom undertaken by Zen Center as a whole. Several practices at Green Gulch do, however, support the possibility of increased contact with this energy flow of the wild.

The first of these derives directly from the traditional Zen emphasis on *work as practice*. Many classic Zen stories find their context in sweeping, cleaning, farming, or chopping wood.³⁴ In Soto Zen, enlightenment often happens in the mundane activities of everyday life. Guest students work two or three mornings in the farm and/or garden, usually engaged in silent mindfulness practice. Staff, other than farm and garden staff, join in solidarity with the summer farm effort once a week before breakfast, planting, weeding, or cropping in silence. These efforts are both practical, in terms of getting the necessary work done, and spiritually unifying, for all community members experience together the energy of soil, fresh air, and landscape on a regular basis.

A second area, which I will call *sacralizing the landscape*, involves institutional commitment to outdoor ceremonies, walks, and commemorations which include the land. In a very traditional way, Zen Center engages the landscape for weddings and memorial sites. Ashes of Zen Center elders—Gregory Bateson, Alan Watts, and Alan Chadwick, among others—are buried on the hillside above the garden. Memorial trees or shrubs have been planted by the pond or in the garden for several dozen people, including Zen teachers Katagiri Rōshi and Maureen Stuart Rōshi. Silent ceremonial ridge walks, as distinct from natural history strolls or recreational hikes, are part of the Center's annual calendar on Arbor Day and New Year's. These place the Center in the larger landscape, meeting the nearby wild zone through the act of walking, receiving the land into the feet. In a similar way, walking meditation sacralizes the garden, bringing human attention to the cultivated space.

Green Gulch has also adopted specific ceremonies to acknowledge nonhuman members of the land- (and mind-) scape. On Earth

Day practice leaders offer ceremonies for animals and trees, acknowledging their presence in the community. In December 1995 a beloved coast live oak crashed to the ground after a severe windstorm; later, a Monterey pine near the meditation hall had to be taken down because of bark beetles. On each occasion an altar was set up near the tree, and people were encouraged to offer incense and to include the dead or soon-to-be-dead tree in their practice.³⁵ I interpret this as an invitation to practice with the wild energy flow of death and destruction.

Last, in considering this third element of Snyder's ecological ethic, I suggest that practices of *simplifying* the institutional schedule and life-style promote contact with the energy flow that sustains life. Many of the traditional Zen practice forms emphasize restraint and moderation. Sensory impact from mechanical noise and bright lights is minimized; *zendo* clothing is dark and unobtrusive. Guest students are expected to maintain silence from early evening through breakfast the next day. During one-day and seven-day retreats, students remain silent the entire time, and the voices of great-horned owls, ocean waves, and blowing wind define the soundscape. To conserve energy and also darkness, Green Gulch has restricted night lighting to what is necessary for minimal safety needs. This leaves the hills dark and unmarked by human light sources, the night animals undisturbed by human presence.

Taken together, these institutional practices in all three aspects of Snyder's ecological ethic generate tangible evidence of a Buddhist practice response to the land at Green Gulch. Offerings of gratitude, commitments of responsibility in several arenas, and regular contact with the energy flow of the wild in the "valley of the ancestors" load the odds for transmitting ecological culture and moving toward reinhabitation. Graced by the rolling hills to the east and west and by the wild ocean to the south, Green Gulch Zen Center is in a strong position to promote an ecological land ethic as an institution and emerging culture for those who come to visit. These practices can be kept vital and evolving with support from those in leadership positions and with ongoing community involvement in environmental issues.

Spirit Rock Meditation Center

Though Spirit Rock Meditation Center does not have the same length of history on the land as Green Gulch, its ecological practices draw on well-established traditions of one of the oldest Buddhist denominations of Southeast Asia. The relationship with the land at Spirit Rock, in its very newness, is still in a honeymoon stage, growing and flourishing as the center attracts more practitioners. Much of the fundraising for the land purchase was motivated by a spontaneous bonding with the land for those leading the effort.³⁶ With more and more students using the land for retreats, the "falling in love" process seems to be multiplying and self-reinforcing.

Looking first at the element of "feeling *gratitude* to all," two core practices at Spirit Rock appear to support this element of Gary Snyder's ecological ethic. One-, seven-, ten-day and three-month retreats emphasize attentiveness practice, as described in the *Satipatthana Sutta* (the Four Foundations of Mindfulness), and mindfulness of breathing (*Anapanasati Sutta*). Guided meditations support practitioners in cultivating subtle awareness of mental and emotional states as well as sensory alertness. Gratitude practice naturally arises in relationship to food as attention to flavor, preparation, and source are noted with each meal. Vietnamese Zen teacher Thich Nhat Hanh has led several day-long meditation retreats at Spirit Rock, each with an elaborate guided eating meditation. Tangerines or apples are distributed to crowds of up to one thousand who may take up to an hour to appreciate the many causes and conditions arising in a single piece of fruit.³⁷

Another major practice at Spirit Rock is the loving kindness meditation (*Metta Sutta*). At the close of each retreat day or class, some form of loving kindness meditation is recited. Many of the Spirit Rock teachers have extended the traditional meditation verses to include the land, the animals and trees of the land, and the gifts of sun and rain. Expression of gratitude takes the form of wishing for the safety, physical and mental well-being, and peacefulness of all members of the land community.

The second element of Snyder's ethic, *taking responsibility* for one's actions, has been central to the land purchase from the start. The Spirit Rock property had long been a prized piece of real estate

in the valley; a number of other uses had been proposed for the property earlier. However, the citizens' San Geronimo Valley Planning Group, in their watchdog role of protecting open space and scenic landscapes, managed to prevent unsightly development along the Sir Francis Drake corridor. Negotiations for the Spirit Rock sale and planning design included important agreements about building sites, scale of operation, and stewardship for the land.³⁸ For the center to be a welcomed member of the West Marin community, Spirit Rock leaders needed to assure local residents of their commitment to protecting the integrity of the land.

The first decisions involved traffic management, both to limit congestion on the two-lane highway and to limit the amount of paved parking on the land. Early on, parking on the dry grass caused some spark-induced brushfires, alarming planners and reinforcing the need for careful attention to car placement. A carpooling policy was implemented by charging parking fees. Parking areas were laid out in curving tree-lined patterns to slow visitors down as they arrived. Center staff made consistent efforts to take responsibility for the potential impact on neighbors from car noise, increased traffic, and grassland fires.

Much of the land stewardship effort thus far has been directed toward careful planning of building projects. The Spirit Rock Design Committee and several architects meet regularly to discuss the scope and scale of the development vision for the land. Factors under consideration are relative invisibility of the buildings from the road, stream bank allowances, and impact on the stately coast live oaks which shape the character of the land. Temporary buildings for the office and meditation hall have been in place since 1990; a dining hall, the first construction project, was completed in 1995 to serve guests on retreat days. Future buildings will be added with additional funds and ongoing monitoring of the cumulative impact on the land and water systems.

Monthly work days are now part of the Spirit Rock tradition of land stewardship. In the beginning, volunteers pulled invasive star thistle and removed old fence posts and barbed wire from the pasture. They cleared brush and cut fallen trees for firewood. As part of one day's meditation, the teacher asked forgiveness of the plants, insects, birds, and animals for the disturbances to their homes. Heavy-labor tasks included digging trenches and sand pits

for power, water, and phone lines as well as irrigation lines and a septic system. Many native trees were planted in the parking area and along the entrance road. Volunteers built bluebird boxes and posted them around the land. In the summer of 1995 several small ponds were excavated and dams built to retain the water. An altar and ceremonial area in Oak Tree Canyon were completed and a trail along the creek was marked out. The ponds are meant both for human enjoyment and as a water source for frogs, birds, badgers, raccoons, fox, deer, bobcats, perhaps even mountain lions.³⁹

In the arena of *community relations*, Spirit Rock caretakers have continued to establish relationships with local neighbors and members of the San Geronimo Valley Planning Group. Though much of the land on the other side of the western ridge is publicly protected open space (Mount Tamalpais State Park and Marin County Water District), all the land adjacent to Spirit Rock is in private hands. In other rural situations in the United States, Buddhist and Hindu retreat centers have sometimes been resented as strange outsiders, bringing a new and not necessarily welcomed culture to the region. Spirit Rock teachers and staff have been consistent in their efforts to fit in with the local community and be cordial neighbors. This has been accomplished through community meetings, public hearings, and regular local contact with residents in the immediate area and nearby towns. Because center members are not versed in land practices, this has meant making a special effort to learn from those who know the territory, bringing in caretakers who could help with the transition from ranch to retreat center.

As part of taking responsibility for institutional actions, Spirit Rock is in the process of developing an *ecological culture* on the land. Though there are few residential staff at the moment (in contrast with Green Gulch), the number of staff and residents will increase as new buildings are added. Spirit Rock, like Green Gulch, is committed to vegetarian meals, thereby limiting their contribution to global environmental destruction caused by beef, chicken, and hog production. Recycling and composting systems have been set up to accommodate retreatants as well as residents and day guests. Fire safety protection is an important drill during the dry summer and fall months when fire danger is high.

To increase awareness of the land and promote a culture of ecological responsibility, Spirit Rock offers a number of *education* programs for children and adults. Volunteer naturalists lead nature walks across the diverse habitats of the four hundred acres, pointing out wildflowers and birds. Monthly children's programs explore the *dharma* teachings of the creek and oak trees. For several years, Spirit Rock has hosted an alternative "Interdependence Day" on the Fourth of July, a chance to appreciate quietly the web of life with members of the spiritual community.

The Spirit Rock Center vision statement explains that the center "is being created as a living mandala: a western dharma and retreat center dedicated to discovering and establishing the dharma in our lives."⁴⁰ Six *Dharma* paths are described: retreats, right relationship, study, hermitage, integration in daily life, and service to the community. A practitioner can develop concentration, understanding, morality, and compassion through any or all of these paths. Cultivating right relationship includes people and also the earth; the service path is based on care and respect for all beings. This statement provides an introductory education on the founding principles of the center, which include respect for the land.

The third of Snyder's guidelines, *keeping contact with the sources of energy* that flow into one's life, is attended to at Spirit Rock primarily through walking meditation. Slow, careful walking practice, noting each step and breath, is a predominant aspect of *vipassanā* practice. At Spirit Rock, long periods of group walking meditation are practiced outdoors, offering opportunities for the feet and mind to absorb the wild energy of the land. One community member leads longer walking pilgrimages across Mount Tamalpais from Spirit Rock to Green Gulch. He specifically seeks to encourage the embodying of landscape knowledge through extended pilgrimage in local wild areas (as opposed to pilgrimages in Nepal or India).⁴¹ Pilgrimage is also a way to bring members of the community together to share the experience of making contact with the land.

One of the six *Dharma* paths of the Spirit Rock vision is hermitage, offering the opportunity "to experience the simplicity and dedication of the renunciate life."⁴² Though hermitage cabins have not yet been built at Spirit Rock, teachers encourage students to incorporate hermitage principles in everyday life through simpli-

fyng consumer habits, spending more time in silence, and highlighting *dharma* study. The hermitage path is perhaps the path of minimum impact and maximum exposure to the other plants and animals inhabiting the land. With this as part of the master plan, the center has built into its practice expectations the possibility that deeper, longer-term connection with the land will develop through hermitage retreats by senior students.

Taken together, these institutional practices, reflecting the three aspects of Snyder's ecological ethic, show evidence of an emerging Buddhist ecological culture in response to the land. Offerings of gratitude, commitments of responsibility to mindful stewardship and community relations, and contact with the energy flow of the wild are helping to establish this center as an environmental model for Buddhist practice. Held by the forested ridges to the south and the open grasslands to the north, Spirit Rock presents another strong opportunity for deepening ecological relations in a practice setting. With the efforts of both centers contributing to the culture of northern California, it is possible that American Buddhism can have a significant influence on environmental practice and reinhabitation in this region. This process, however, is not without its points of tension.

Points of Tension

Though both of these centers now include certain ecological practices as part of their religious cultures, neither is specifically committed to the goal of ecological sustainability or self-reliance. This degree of reinhabitation would stretch the capacities of staff and residents beyond their current loads. For both centers the top priority is to transmit Buddhist teachings and provide a supportive place to practice. It is simpler and more convenient to depend on external sources for food, energy, supplies, and funding. The choice to draw on diverse trade sources, however, often involves certain advantages of class and cultural privilege. Can reinhabitation take place if residents are primarily dependent on goods produced away from the land?

If ecological sustainability were to become an institutional goal, debates would arise over how to *use* the land: could the open space areas remain protected given the need to grow more food? Much

of the current attractiveness of both places depends on the sense of spaciousness from undeveloped land. This provides a kind of literal "breathing room" from the urban pressures of noise, pollution, and population. However, this aesthetic use of the land might be threatened by the choice to move further toward reinhabitation.

Buddhist centers in the United States and elsewhere have the opportunity to apply Buddhist analysis and self-study to their own institutions. Green Gulch and Spirit Rock have already done this in examining governance and economic structures and student-teacher relations. To do the same depth of work around ecological matters would mean investigating institutional habits around the relationship between nature and culture. To what extent do American Buddhist centers reproduce the dominant cultural attitudes of culture as superior, nature as inferior; culture as control, nature as chaos; culture as male, nature as female?⁴³ At Green Gulch this is manifest in giving weight and value to *zazen* meditation over ecological work practice. Farm and garden workers are seen by some as inferior to those who spend more time in the *zendo*, even though this is not supported by the teachings.

Another area of tension is around the need for community. In indigenous cultures, inhabitation goes hand in hand with culture and community. Generation after generation inhabits the same land, passing on knowledge of place through culture and social interaction. Religious centers such as Green Gulch and Spirit Rock are explicitly *not* permanent communities but rather learning or training centers where people stay for different lengths of time. Can ecological culture be transmitted by example, if not through successive generations? There is a built-in conflict here: the more a practitioner engages in environmental work or contact with the land, the more he or she participates in a sense of community with others sharing the same experience. This leads to the desire to become a more permanent resident on the land—a move toward reinhabitation. However, because of the land's limited carrying capacity, this can constrict others from having access to the place at the same level of commitment. How can these religious centers serve as transmitters of ecological culture and values without the generational element of residential community?

Perhaps one of the most difficult questions lies in governance: who carries the burden of landownership and ecological steward-

ship? Legally, it is the board of directors and the staff they hire who are responsible; spiritually, the leadership role falls to the abbot and practice leaders. In contrast to the single head-of-household owner who makes most decisions for an individual piece of private property, the governing bodies of Green Gulch and Spirit Rock handle land responsibilities in diffuse arenas with various people carrying pieces of the land's history, capability, and management needs. Ecological monitoring is uneven and primarily related to human needs (water, wood, garden spaces, farm produce). Long-term planning for restoration of degraded habitats and expanded human use has been discussed informally but not incorporated into master plans for the sites.

Challenges for the Future

This evaluation documents ecological practices at two of the larger Buddhist centers in the San Francisco Bay area. Though some steps have been taken toward reinhabitation, many areas of ecological stewardship still need attention. In the course of this study, I have noted some of the immediate needs as well as future institutional challenges which are unresolved at present.

Green Gulch Zen Center and Spirit Rock Meditation Center both face issues of carrying capacity as they become increasingly attractive to students of Buddhism. This will require a closer look at pressures on parking spaces (always full on Sundays at Green Gulch and on Monday evenings at Spirit Rock), considering whether to limit attendance or pave more land to accommodate cars. Pressures on sewage, water, and energy sources will also rise with increasing numbers of visitors. Green Gulch, for example, may need to hold fewer programs and conferences in the fall when water supplies are at their scarcest.

Land-management issues already plaguing other parts of Marin County may sooner or later become problems for these two properties. Among these are the spread of feral non-native pigs who gouge the land and root up acorns and seedlings. On some nature preserves they are systematically hunted to prevent encroachment. This problem will likely affect Spirit Rock sooner than Green Gulch, but with so much open space connecting the two, it may be only a

matter of time before the pigs are on the coast as well. Fire management is also an issue since coastal scrub, grassland, and coastal forests have evolved with fire in the California landscape. Fire suppression around human habitations often only postpones the inevitable. Both centers, as environmental stewards, will need to consider controlled burns or other fire-management methods to reduce fuel load.

People at Green Gulch are already raising questions about extensive stands of non-native trees on the property. The acacias in particular are quite fire-prone and present some danger to the adjacent dining area.⁴⁴ In earlier rounds of tree planting, Monterey pines were chosen to hold the soil and generate fast-growing poles and firewood. Locals have criticized these trees as non-native to the northern coastal regions as well as subject to bark beetle infestation. The prominent Australian eucalyptus, appreciated by many for its hanging strips of bark, drips oils that poison the soil below, reducing the biodiversity under these trees. Which of these trees should come out? Which should remain? Taking responsibility in this case means asking difficult ethical and ecological questions.

Both centers have small creeks on the land, though Green Gulch Creek is the larger and more managed. Water quality and aquatic habitats will need to be monitored, especially where dams impound water and holding basins have become clogged with silt. Waterways are natural corridors for songbirds and small mammals and can easily be enhanced to serve their food and shelter needs by allowing understory plants and aquatic insects to flourish. As for larger scale challenges, some of these will require creative initiative from either residents or guest/lay members to encourage a developing environmental conscience. In her book, *Campus Ecology*, April Smith outlines key areas for academic institutions to evaluate their ecological practices.⁴⁵ Many of these are applicable to religious institutions such as Green Gulch Zen Center and Spirit Rock Center. In the arenas of waste and hazard management, these two centers can work toward reducing the volume of solid waste beyond what is composted or recycled. This means attention to precycling, or choosing products with little or no packaging. It also means providing adequate disposal of potentially hazardous substances, such as used batteries, old tools, paints and solvents, autoshop chemicals, and concentrated organic pesticides.

More work can be done in the area of resource flow and infrastructure. While water is closely monitored at Green Gulch, energy use is dispersed and responsibility for energy conservation is uneven. Electrical heaters are often left on when rooms are empty. Food flows are managed closely at both centers to save money and as part of a commitment to vegetarian meals. Although perhaps half of the produce eaten at Green Gulch is organic, the center could in the future commit to an entirely organic menu, supporting local farmers as much as possible. As hazards from chemical agriculture are documented, particularly as hormone disrupters and immune system depressers,⁴⁶ one of the greatest supports to practitioners at both centers might be safe and healthy food.

Smith advocates institutional procurement policies to streamline product use, especially for recycled paper products in restrooms and offices. Both centers could make the choice to buy unbleached paper where possible, to minimize chlorine and dioxin hazards to users. Both centers currently have reusable dishware, eliminating the waste of disposable cups and plates; residents at Green Gulch are debating the option of cloth napkins and personal cups. For picnics and outdoor celebrations, the centers could encourage people to bring their own flatware and dishes, rather than using paper or plastic products.

As each center grows, their budgets grow. Funds are banked in institutions or held in stocks and bonds. The boards of these two centers can promote and implement a policy of socially responsible investing, to carry institutional weight into the arena of greening financial management. Taking responsibility at these levels will require more committee work and more volunteers helping the institutional structures evolve in their ecological ethics. As this work is engaged, it will be important for the centers to publicize their efforts among their own members as well as visitors to generate support and solidarity for this ecological work.

Buddhist Centers as Ecological Role Models

This first piece of comparative research on two Buddhist centers raises many interesting questions which will require additional case study work with diverse centers. Future research may include

reviews of ecological practice at some of the following institutions: Rochester Zen Center (New York), Mt. Tremper Zen Center (New York), Karme Chöling Tibetan Center (Vermont), Manzanita Village (California), Shambhala Center (Colorado), Mountains and Rivers Temple (California), and others.⁴⁷ At this point it is unclear whether ecological practices are primarily motivated by Buddhist tradition or by American environmentalism. Will ecological culture become a mark of American Buddhism? It is also unclear how ecological practice relates to meditation practice and other aspects of Buddhist training in the specific centers. In future work, I would like to find out which aspects of Buddhism, as taught or practiced at individual centers, actually *discourage* the evolution and adoption of ecological culture.

If institutions such as Buddhist retreat centers are to become more ecological in practice and concerns, upon what elements does such an evolution depend? Some possible significant factors may be: 1) the role of center leadership in establishing ecological priorities; 2) the creativity and efforts of key staff people; 3) the degree of teaching emphasis on the role of the environment; 4) methods for preserving and transmitting religious and cultural traditions; 5) the practice place itself and its ecological history and management needs; 6) outside development pressures. Some of these may be operational for certain centers but not for others; each center will have a distinct and complex story of environmental involvement. By examining both rural and urban centers, centers from diverse Buddhist traditions, and centers of different scale and leadership patterns, I may then be able to discern some patterns of ecological practice.

From this preliminary review of these two centers, it seems clear that Green Gulch Zen Center and Spirit Rock Meditation Center are beginning to demonstrate what is institutionally possible in living an ecological ethic. Religious centers in the past have served as role models for the wider community; perhaps these Buddhist centers can show others in Marin County and the wider Bay area how people can live more simply and environmentally. By offering gratitude, taking care of the land effectively, and keeping access open to the wild energy flow of the land, these centers support the very foundations of *dharma* practice. Working together as Buddhist neighbors and institutional *kalyana mitta* (spiritual friends), they can

encourage others to act in environmentally responsible ways for the health of humans and nonhumans on the land. Over time, the incorporation of ecological culture into the everyday life of these centers may inspire visitors to transfer these practices to other institutions and households. Thus, seeds of ecological culture based in spiritual practice can support the beginnings of reinhabitation, drawing on the energy flow that sustains all life.

Notes

1. I am grateful to Kenneth Kraft and Wendy Johnson for their comments on earlier drafts of this article.

2. Sidney Piburn, ed., *The Dalai Lama: A Policy of Kindness* (Ithaca, N.Y.: Snow Lion Publications, 1990); see also, among Thich Nhat Hanh's many books, *For a Future to Be Possible* (Berkeley: Parallax Press, 1993) and *Being Peace* (Berkeley: Parallax Press, 1987).

3. For example, see Joanna Macy's treatment of Buddhist philosophy in *Mutual Causality in Buddhism and General Systems Theory: The Dharma of Natural Systems* (Albany: State University of New York Press, 1991).

4. See, among others, Lester Brown, "Launching the Environmental Revolution," *State of the World 1992* (New York: W.W. Norton, 1992), 174-90; and Herman E. Daly and John B. Cobb, Jr., *For the Common Good* (Boston: Beacon Press, 1989).

5. Michael Wenger, "History of Zen Center," *Wind Bell* 27, no. 1 (spring 1993):15-17.

6. Shunryu Suzuki, *Zen Mind, Beginner's Mind* (New York: Weatherhill, 1970); Edward Espe Brown, *The Tassajara Bread Book* (Boulder, Colo.: Shambhala Books, 1970).

7. Wendy Johnson and Stephanie Kaza, "Landscape Ecology and Management Concerns at Green Gulch Zen Center: A Report to the Zen Center Board of Directors," 5 November 1991.

8. Interview and site visit with Wendy Johnson, Green Gulch garden staff, June 1992.

9. Meredith Moraine and Jerry Steward, "The Story So Far," *Spirit Rock Meditation Center Newsletter*, September-January 1995, 5.

10. *Spirit Rock Meditation Center Newsletter*, February-August 1996, 4.

11. "Sangha of 1000 Buddhas," *Spirit Rock Meditation Center Newsletter*, February-August 1996, 10-11.

12. These have been catalogued in various taxonomies; see, for example, Warwick Fox, *Toward a Transpersonal Ecology* (Boston: Shambhala Books, 1990); and Steven C. Rockefeller, "Principles of Environmental Conservation and Sustainable Development: Summary and Survey," prepared for the Earth Charter project, April 1996.

13. Holmes Rolston III, *Philosophy Gone Wild* (Buffalo, N.Y.: Prometheus Books, 1989), 111.

14. Valerie Plumwood, *Feminism and the Mastery of Nature* (New York: Routledge, 1993).

15. Reed F. Noss and Allen Y. Cooperrider, *Saving Nature's Legacy: Protecting and Restoring Biodiversity* (Washington, D.C.: Island Press, 1994); and R. Edward

Grumbine, *Ghost Bears: Exploring the Biodiversity Crisis* (Washington, D.C.: Island Press, 1992).

16. David Abram, *The Spell of the Sensuous* (New York: Pantheon Books, 1996).

17. Aldo Leopold, *A Sand County Almanac* (New York: Oxford University Press, 1949; reprint New York: Ballantine Press, 1970); all quotes here are from the paragraph on pp. 239–40.

18. Described in Ray Dasmann's paper, "National Parks, Nature Conservation, and 'Future Primitive,'" presented at the South Pacific Conference on National Parks, Wellington, New Zealand, February 1975.

19. Gary Snyder, "Reinhabitation," in *A Place in Space* (Washington, D.C.: Counterpoint Press, 1996); first published in *The Old Ways* (San Francisco: City Lights Books, 1977), 191.

20. *Ibid.*, 188.

21. *Ibid.*, 190–91.

22. See Macy, *Mutual Causality in Buddhism*, chapters 2, 3, 10, and 11; also Francis H. Cook, *Hua-Yen Buddhism: The Jewel Net of Indra* (University Park: Pennsylvania State University Press, 1977).

23. See Elizabeth Roberts and Elias Amidon, eds., *Earth Prayers* (San Francisco: Harper, 1991), 120–21, for one environmentally based version of the precepts prepared for Earth Day 1990 at Green Gulch Zen Center.

24. Daily service and meal chants provided by the office of the *Eno* (Head of *Zendo*) at Green Gulch Zen Center.

25. Stephanie Kaza, "A Community of Attention," *In Context* 29 (summer 1991):32–35.

26. Annual wildflower lists on file with and prepared by Wendy Johnson, garden staff, Green Gulch Zen Center.

27. Annual records and documentation of Arbor Days provided by Wendy Johnson.

28. Johnson and Kaza, "Landscape Ecology and Management Concerns at Green Gulch Zen Center," 3–5.

29. Site visit with Peter Rudnick, Head of Farm, June 1995.

30. *Ibid.*

31. Some of the principal contacts in these consultations have been Mia Munroe, Muir Woods National Monument park ranger; Yvonne Rand, Zen teacher; and Wendy Johnson, Green Gulch garden staff.

32. Green Gulch site visit, June 1992.

33. Prepared by Stephanie Kaza in consultation with Green Gulch staff; brochure available in Green Gulch office.

34. See collections such as *The Mumonkan* (various translations) and *Book of Serenity*, trans. Thomas Cleary (Hudson, N.Y.: Lindisfarne Press, 1990).

35. Wendy Johnson, "Sitting Together under a Dead Tree," *Wind Bell* 30, no. 2 (summer 1996):34–36.
36. Meredith Moraine and Jerry Steward, "The Story So Far," *Spirit Rock Meditation Center Newsletter*, September-January 1995, 5.
37. *Spirit Rock Meditation Center Newsletter*, February-August 1996, 2.
38. *Spirit Rock Meditation Center Newsletter*, September-January 1995, 5.
39. *Ibid.*, 3, 9.
40. Vision Statement for Spirit Rock Meditation Center, 1995, 1.
41. Dharma Aloka, "Pilgrimage Here and Now," interview by Anna Douglas, *Spirit Rock Meditation Center Newsletter*, February-August 1996, 12–13, 16. Dharma Aloka describes the walking: "The ritual nature of formal pilgrimage sets it apart from everyday life. It's a kind of liturgical drama enacted in a sacred landscape."
42. Vision Statement for Spirit Rock Meditation Center, 1995, 3.
43. See Sherry Ortner, "Is Female to Male as Nature Is to Culture?" in Michelle Zimbalist Rosaldo and Louise Lamphere, eds., *Woman, Culture and Society* (Stanford, Calif.: Stanford University Press, 1974), and many subsequent feminist theory articles discussing her assertions.
44. Johnson and Kaza, "Landscape Ecology and Management Concerns at Green Gulch Zen Center."
45. April Smith and the Student Environmental Action Coalition, *Campus Ecology* (Los Angeles: Living Planet Press, 1993).
46. See new evidence gathered in Theo Colborn, Dianne Dumanoski, and John Peterson Myers, *Our Stolen Future* (New York: Dutton, 1996).
47. Also see Jeff Yamauchi's article on "The Greening of Zen Mountain Center: A Case Study," included in this volume.