



## GUARDIANS of GAIA

Will future generations forgive us for the radioactive legacy we've left behind?

To remind us of our ignorance, let's turn

our toxic waste sites into places of pilgrimage and prayer,

counsels this Buddhist scholar and social activist.

BY JOANNA MACY

ILLUSTRATION BY ELLEN SASAKI

For thou shalt be in league with the stones of the field, and the beasts of the field shall be at peace with thee.

-- Job 5:23

his verse from the Bible delighted me as a child and stayed with me as I grew up. It promised a way I wanted to live — in complicity with creation. It still comes to mind when I hear about people taking action on behalf of other species. When our brothers and sisters of Greenpeace or Earth First! put their lives on the line to save the whales or the old-growth forests, I think, "Ah, they're in league."

To be "in league" in that way seems wonderful to me. There is a comfortable, cosmic collegiality to it — like coming home to conspire once more with our beloved and age-old companions, with the stones and the beasts of the field, and the sun that rises and the stars that wheel in the sky.

Now the work of restoring our ravaged Earth offers us that — and with a new dimension. It puts us in league not only with the stones and the beasts, but also with the beings of the future. All that we do for the mending of our planet is for their sakes, too. Their chance to live in and love our world depends in large measure on us and our often uncertain efforts.

At gatherings and workshops that address the ecological or nuclear crisis, we often begin with an evocation of the "beings of the three times." We invite their presence at our deliberations. In evoking beings of the past and the present, we take time to speak their names, spontaneously and at random - names of ancestors and teachers who cherished this Earth, then names of those living now, with whom we work and share this time of danger. But after the third evocation, which calls on the beings of future time, there is silence: for we do not know their names. Yet that moment of silence is the most potent of all to me, for those unborn ones are so many, and so innocent, and so at our mercy.

I sense them hovering, like a cloud of witnesses, those beings of the future times. Sometimes I fancy that if I were to turn my head suddenly, I would glimpse them over my shoulder — they and their claim on life have become that real to me. Philosophers and mystics say that chronological time is a construct, a function of our mentality; there is also, they

say, a dimension in which all time is simultaneous, where we co-exist with past and future. Perhaps because I am so timeridden, hurrying to meet this deadline and that appointment, I am drawn to that notion. The dimension of simultaneity, where our days and centuries merge in a blink of the cosmic eye, is powerful to me, giving context and momentum to work for social change.

In that context, it is plausible to me

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that the generations of the future want to lend us courage for what we do for their sake. I imagine them saying "thanks" to Randy Hayes and John Seed for their dogged efforts to protect the rainforests. Thanks to Jacques Yves Cousteau for his campaign on behalf of the seas. Thanks to Amory and Hunter Lovins for their work on renewable energy sources, to leave breathable air for those who come after us. Thanks to Fran Peavey and her Indian friends for organizing to clean the Ganges, and to Mark Dubois and Sulak Sivaraksha for working to save other great rivers. For countless similar efforts by countless other people, thanks.

The imagined presence of these future ones comes to me like grace, and works upon my life. That is one reason why I have been increasingly drawn to the issue of radioactive waste. Of the many causes that pull us into league with the future, this one, in terms of time and toxicity, is the most enduring legacy our generation will leave behind.

Over 10 years ago I engaged in a citizens' lawsuit to stop faulty storage of high-level waste at a nearby nuclear reactor. Night after night, to substantiate our legal claims, I sat up studying the statistics, trying to understand the phe-

nomenon called ionizing radiation. I pored over the research of Rosalie Bertell and Ernest Sternglass, who, despite government censorship, revealed the exceedingly high incidence of miscarriages, birth defects, leukemia, and other cancers in the proximity of nuclear plants. Learning that genetic damage would accelerate over time, I strained to conceive of *spans* of time like a quarter million years, the hazardous life of plutonium.

During that period I had a dream so vivid that it is still etched in my mind. Before going to bed, I had leafed through baby pictures of our three children to find a snapshot for my daughter's high school yearbook.

In the dream I behold the three of them as they appear in the old photos, and am struck by the sweet wholesomeness of their flesh. My husband and I are journeying with them across an unfamiliar landscape. The land is becoming dreary, treeless, and strewn with rocks; Peggy, the youngest, can barely clamber over the boulders in the path. Just as the going is getting very difficult, even frightening, I suddenly realize that by some thoughtless but unalterable pre-arrangement, their father and I must leave them. I can see the grimness of the way that lies ahead for them, bleak as a red moonscape and with a flesh-burning sickness in the air. I am maddened with sorrow that my children must face this without me. I kiss each of them and tell them we will meet again, but I know no place to name where we will meet. Perhaps another planet, I say. Innocent of terror, they try to reassure me, ready to be off. Removed and from a height in the sky, I watch them go - three small figures trudging across that angry wasteland, holding each other by the hand and not stopping to look back. In spite of the widening distance, I see with a surrealist's precision the ulcerating of their flesh. I see how the skin bubbles and curls back to expose raw tissue, as they doggedly go forward, the boys helping their little sister across the rocks.

I woke up, brushed my teeth, showered, and tried to wash those images away. But when I roused Peggy for school, I sank beside her bed. "Hold me," I said, "I had a bad dream." With my face in her warm nightie, inhaling her fragrance, I found myself sobbing. I sobbed against her body, against her 17-year-old womb, as the knowledge of all that assails it surfaced in me. The statistical studies of the effects of ionizing radiation, the dry



columns of figures, their import beyond utterance, turned now to tears, speechless, wracking.

Our citizens' group lost its suit against the Virginia Electric Power Company, but it taught me a lot. It taught me that my children are all children for centuries to come. It taught me about the misuse of our technology and the obscenity of the legacy it bequeaths future generations—lessons confirmed by recent media exposés about mismanagement of nuclear wastes.

•Hundreds of thousands of metric tons of radioactive waste have been generated by our production of nuclear power and nuclear weapons.

•The toxicity of these wastes requires them to be kept out of the biosphere for many times longer than recorded history.

• "Temporarily" stored in tanks, trenches, pools, and even cardboard boxes, it is leaking into the air, soil, aquifers, and rivers in 34 out of 50 states.

•No permanent repositories are operative.

•As a "final solution," two mammoth burial sites are being prepared in New Mexico and Nevada.

If we think on behalf of future beings, this last fact is the most alarming of all. Eager to put it out of sight and out of mind, our government intends to bury the waste. As we discover in other aspects of our lives, hiding does not work in the long run. This is especially true of nuclear materials because, irradiated by their contents, containers corrode, and because Earth's strata shift and water seeps and the radioactivity will seep with them — into the aquifers, into the biosphere, into the lungs and wombs of those who come after. Indeed, the two designated repositories are already presenting problems: Salt brine is leaking into the New Mexico site, and the other. adjoining the Nevada testing site, is geologically at risk.

Standing there in the briefing room, I wondered how that question would be answered if we were to inhabit our Earth with a sense of time and of our unfolding story. If our long, ongoing evolutionary journey were real to us, if we felt the aliveness of our planet home and a living connection with those who come after, would we still want to sweep these wastes under the rug? Hide them like a secret shame and go on about our business as before?

A different approach to nuclear wastes came to mind in England five years ago,

as I visited Greenham Common and other citizen encampments surrounding U.S. nuclear missile bases. These encampments, with their dogged dedication and strong spiritual flavor, reminded me of those monasteries that kept the lamp of learning alive through the Dark Ages. I realized that it would require communities empowered with similar dedication to guard the centers of radioactivity we bequeath to future generations for thou-

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sands of years.

In my mind's eye I could see surveillance communities forming at today's nuclear facilities. These Guardian Sites would be centers of reflection and pilgrimage, where the waste containers are religiously monitored and repaired, and where the wisdom traditions of our planet are the source for contexts of meaning and disciplines of vigilance. Here "remembering" is undertaken - the crucial task of continuing mindfulness of the radioactive presence and danger. Here those who come for varying periods of time participate in an active learning community, to receive training and to alert the public at large about the necessity for nuclear guardianship.

The vision has remained with me, reinforced by reading technical papers on the necessity and feasibility of aboveground storage of nuclear wastes. When I think about how the beings of the future will relate to our radioactive legacy, an unexpected danger occurs to me: the danger that they may not take seriously the toxicity of these wastes. That is because it will probably be hard for them to accept the fact that we, their ancestors, would knowingly fabricate and leave behind materials that would cripple and

kill for millennia to come. How will they believe that we would do that? Such criminality may be hard for them to accept. They may be tempted to deny it, just as a growing number of people today want to deny the reality of the Holocaust.

The challenge for them, therefore, in protecting themselves from these wastes, will have to begin with acceptance of what we, their ancestors, have done. As I ponder that, it seems that in order for that acceptance to occur, a measure of forgiveness will be necessary. Our generation's crime against the future will be too terrible to be believed, unless it can, in some measure, be identified with — that is, in some measure, forgiven.

If that is so, when should acceptance and forgiveness begin? Must it begin already with ourselves? So that we can stop trying to hide our guilt and bury our shame? So that we can find solutions other than hiding our nuclear wastes in the living ground?

Such are the reflections that turn in my mind. They bring the future ones close, as if we were in conversation. These beings who are yet to be born teach me about the acceptance and forgiveness that are needed if mending is to occur. Sometimes I fancy I can see their faces — some are human like mine, others furred or feathered. My heart is warm to that company. That warmth encourages me to begin to work to create a demonstration Guardian Site for nuclear wastes.

At a recent meeting of educators, my friend Brian Swimme was asked to introduce me. He did so, saying, "She has a lot of friends. Most of them aren't born yet." The same is true for Brian. It is true for all of you who choose to take part in the mending of our world.

For then, thou shalt be in league with the beings of the future, and the generations to come after shall be at peace with thee

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## RESOURCE

Joanna Macy and a number of colleagues have initiated the Nuclear Guardianship Project, a citizen effort to develop and assist long-term management of nuclear wastes for the protection of the biosphere. For further information, contact NGP, 2118 7th St., Berkeley, CA 94710.