The Whole Earth Building

By Nancy Mintie

A child's idea and a community's collaboration create a unique green building made from on-site earth.

"Green building stories are boring!" the seasoned Los Angeles Times environmental reporter informed me. "Not this one," I thought to myself. "We have kids, Iranians, artists, Chevron, mad genius teenagers, and a Native American tribe. In fact, it's been a little too interesting around here for some time."

It all started seven thousand years ago. That's when the first human beings stepped foot onto this patch of California land that is the subject of our tale. Things went very well for the first 6.75 thousand years or so. People took what they needed from the land, leaving enough behind for the wildlife and successive generations. For instance, they observed that during the late summer, the mesquite plant made up three quarters of the coyote's diet. So even though they used the plant for many of their own needs, these thoughtful folks made sure to leave enough untouched to ensure Brother Coyote's survival.

After thousands of years of peaceful living, everyone knows what happened next. Culture clash. Genocide. The San Gabriel Band of Mission Indians, or "Tongva" in their own language, nearly died out, with the few remaining survivors being driven underground to escape discrimination and persecution.

Fast forward to the twenty-first century. The surviving Tongva are emerging from obscurity and promoting a revival of their culture, language, and traditional knowledge. We can learn from them. Nearby, our nonprofit organization, Uncommon Good, is attempting to create sustainable communities where everyone's basic needs can be met in a healthy environment. And we are working on these big "save the world" projects on a shoestring budget, as these things generally are done, out of donated space in a hundred-year-old convent. We are educating the children of the poor, supporting young doctors working in the slums, and starting urban farm projects, all with an environmental focus. For we had noticed during Hurricane Katrina, that there was a conspicuous absence of bodies of the rich floating down the streets of New Orleans. It had become gruesomely obvious that in a deteriorating environment, the poor would be hurt first and worst. And it had become equally obvious that we wouldn't be able to have a pristine environment if we had starving poor who would do anything necessary to feed their children, even if it meant cutting down the last tree on the planet. So we knew that eliminating poverty and saving the earth had become inextricably intertwined activities.

But on our way to saving the world, we hit a bump in the road. The old convent was declared unsafe. We were losing our workplace. As we were bemoaning the fact that we'd now have to come up with rent money for a depressing storefront somewhere (the convent, old as it was, had had a certain retro flair), a student in our youth environmental program piped up. She'd learned about an Iranian architect in one of her classes at school who was promoting the building of radically sustainable handmade buildings using little more than on-site earth. "Could we build one?" she asked.
Immediately, ecstatically, we grasped what this could mean. If we could create a building that did not harm the earth in any way, out of the simplest of materials, we could model how, in the words of Gandhi, “to live simply so that others may simply live.” We could walk the walk, not just talk the talk. And if we could do this here in Los Angeles County, California, which has the strictest building codes in the world, we could show that it could be done anywhere by anyone on the planet wanting to build a home for his or her family or enterprise.

Okay. Great idea. But no land. And no money. Uncommon Good didn’t have the funds to buy property in Southern California, home of sky high land prices. So the idea nearly died in its infancy until a local congregation, the Claremont United Methodist Church, stepped up and offered to share a piece of its campus for the building. Later, the church was joined by the neighboring Claremont School of Theology, which also allowed part of its land to be used for the project.

Okay. Great idea. Got land. But still no money. We went to every known foundation that funded capital campaigns and were hurriedly shown the door at each one, even those with an environmental focus. Building a dirt building was either too radical, or too humble, or too untried, or too visionary, or too something for them all.

Then Chevron got sued and we got lucky. Chevron decided to settle the litigation in part by creating a pot of money that could be used for clean air projects in California. Most of the applicants for the money were in the field of transportation. But we argued that buildings use forty percent of the energy in this country and seventy-percent of the electricity, and creating all of that power caused air pollution. So if we could demonstrate a way to create and operate a building that used nothing but human power and solar energy, and that, in addition, actually functioned as a carbon sink, absorbing more carbon emissions than it created, we could make a great contribution to air quality and climate change mitigation.

It worked. We got the money. (And as I am legally obligated to insert in any discussion of the building’s funding: This project was funded by a grant from the Reformulated Gasoline Settlement Fund.) But there was one thing more to be done. It turns out that the land offered to us by the church and the school of theology was precisely where those first humans that we mentioned in the first paragraph of this story had settled eons ago. For
thousands of years, the ancestors of the Tongva people had lived, played, worked, and prayed on this site. So it only seemed right to ask the permission of the Tongva to build there. We sought out a tribal elder who consulted with the Tongva leadership. The tribal members not only gave us their blessing, but partnered with us to help the project promote a return to their traditional value of

This page above: Volunteers of all ages helped construct the Whole Earth Building.

This page left: The WEB’s arched Great Gathering Room.

Next page top: Children from Uncommon Good’s educational program on the front patio of the Whole Earth Building.

Next page bottom: The inner arches of the WEB follow the curved pattern of the building and are decorated by local artists to reflect local indigenous culture.
living in harmony with Nature, or in other words, sanity.

The result is the world’s first Whole Earth Building or WEB, as in “web of life,” because we took the entire ecosystem into account in its construction and operation, including the soil, water, air, energy, plants, wildlife, people, and community. We combined the best of ancient earth building techniques with the best of modern green technology. This beautiful, sophisticated building was built entirely by hand, using only on-site earth for eighty-five percent of its building materials, and is expected to stand for five hundred years.

Hundreds of community volunteers participated in the WEB’s creation, including Tongva tribal members, children, seniors, scientists, artists, and low-income families. Young golden-brained geniuses from the renowned engineering school, Harvey Mudd College, created a unique earth air tunnel system that provides additional cooling to the building on those few days when the thick walls alone do not provide sufficient insulation. Tongva ethnobotanists helped us select native plants for the landscape and for the first-of-its-kind green roof that are of most importance to the tribe’s culture. Internationally renowned artist Sheila Pinkel made photo tiles of Tongva artifacts, plants, and animals to adorn the building, as well as a magnificent photo mural illustrating Tongva symbols and cosmology. Another artist copied prehistoric pictographs from the region’s caves onto some of the walls. Solstice and equinox markers were created to help the staff track when to extend or retract the windows’ light shelves to take advantage of the changing angles of the sun as the year progresses. A seasonal stream bed returns storm water runoff to the ground water.

The building’s groundbreaking made press on every continent except Antarctica. Al Gore’s Climate Reality Project (then Alliance for Climate Protection) endorsed the project. The building was visited by recently retired Dr. James Hansen, head of NASA’s Goddard Institute for Space Studies, the world’s foremost climatologist.

As of this writing, Uncommon Good is finishing up the details for its occupancy permit. A joyful Grand Opening then will ensue with the hundreds of community people who contributed their labor and talents to the project. Then Uncommon Good will move into its beloved Whole Earth Building, to humbly resume its mission of serving the poor and saving the planet, joyfully and against all the odds.

Nancy Mintie is Executive Director of Uncommon Good in Claremont, California. The organization’s website is at www.uncommongood.org.