

oregon home's

2006

# green living

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# mission: *the good life*

*When Cyndee and John McDaniel, two globe-trotting adventurers, decided to settle down in Central Oregon, they wanted to live lightly on the earth. Here's how they hand-built a home that honors the land—and the lifestyle—they love.*

BY ELISABETH DUNHAM ■ PHOTOGRAPHY BY SALLY SCHOOLMASTER

"The whole house is hand-stuccoed and hand-plastered," says Cyndee. "Because of how the sun hits the southwest-facing walls, we had to have all the stucco on before noon. So John and I and three of our good friends were out here at 5 a.m. stuccoing—and we finished exactly at noon!"





Cyndee and John McDaniel's home rises out of the ground like a small rock formation, its walls reaching skyward and delivering views of nine mountains. Perched atop a cliff, the earth-colored adobe-style house seems like a natural setting for two avid rock climbers who never thought they'd put down roots, but sought to tread lightly on the land when they finally did.

After driving down a series of narrow country roads to Crooked River Ranch in Terrebonne, Ore., you pull up to a Southwestern-style home, an oddity in Central Oregon, where nouveaux Craftsman designs dominate. The tour begins, appropriately enough, at a front door made from desert cypress and other wood recycled from old mission buildings in Mexico. The McDaniels designed the door, which was made by a company just south of Guadalajara. The door—like the house—is impressive without being overwhelming.

"Someone drove by and said, 'I really like the color of your house—it looks like dirt!'" says John. "And we took that as an important compliment, that we'd achieved dirt. We wanted the house to blend in and disturb the land as little as possible."

The lack of impact was more than just visual. Constructed largely of recycled, renewable and nontoxic materials, the house uses very little

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energy thanks to its passive solar design, efficient appliances and radiant-heat system. Native landscaping and a rainwater-catchment system reduce water use, even in summer's hottest months.

"It was a priority to build this way because it's part of our core values of how we believe we should live on this earth," Cyndee says. "Being climbers, rock and mountain people who enjoy being close to the earth, we didn't want to harm it in any way."

THE MCDANIELS KNOW WELL every bit of material that went into the house because they built it themselves. After exploring a number of alternative building materials, the couple opted to build with Rastra, which is made from 85 percent recycled polystyrene. The stackable, highly insulated product is in-filled with vertical and horizontal rebar and then filled with concrete. Subcontractors handled the concrete foundation, the roof, Sheetrock and insulation,

while the McDaniels handled just about everything else themselves (including stacking, filling and plastering the Rastra walls). "The house is really massaged by human hands, resulting in a lot of positive energy in the house," says Cyndee. "Throughout the process we had family and friends who generously gave us their time and helped us build this house."


While the idea of building your own house sounds daunting, the process came rather naturally to the couple. Though his background is in engineering, John has worked as a carpenter on and off since college. Cyndee, a registered nurse who specializes in community health and geriatrics, grew up in homes that her parents built themselves while, at the same time, raising four children.

"I can remember being 10 years old and moving into the first house that my parents built," says Cyndee. "Being raised with that, I wasn't afraid to build this house ourselves."



"We planted all the areas around the house with native grasses that we transplanted from elsewhere on our property," says Cyndee, with John and Brogan. The front door is a custom design built in Mexico from desert cypress and framed in rustic timbers salvaged from an old Spanish mission.





"There is such satisfaction in sitting back at the end of the day and saying, 'This is what we accomplished,'" says John.

"I love how light it is inside Cyndee and John's home—and how open it is to the outside," says architect Cheryl Heinrichs. "I also like that they're minimalists: There is a purpose for every room, window, shelf, cupboard and stick of furniture." Brogan lounges on ceramic tile from Color Tile. The rug is a souvenir from a trip to Bolivia. The dining table and chairs are from Dania.

The McDaniels' had help from a crew of family members and friends who came back time after time to help them lay pipe, bend rebar and put in tubing for the home's radiant-heat system. Most of the stuccoing and plastering was handled at "stucco parties." Cyndee's dad was a constant source of support and a major contributor, helping them dig ditches in blistering 95 degree heat.

All of the energy and hard work put into building the house gave Cyndee and John, who share their home with Brogan, their 8-year-old golden retriever, a sense of ownership that goes far beyond holding the title to the property. "You feel proud of it and you know every inch of it," John says. "You can remember the day you built that wall. There is such satisfaction in sitting back

## AHEAD OF THE ECO-CURVE

Cyndee and John McDaniel designed and built their home in 2001, before green building had really taken hold. Here's a peek at some of the eco-friendly features that put them ahead of the curve:

**The ConServ refrigerator:** The McDaniels' Scandinavian-made ConServ refrigerator (right) is not only energy efficient, it's made from recycled stainless steel. The fridge includes a built-in condenser for lower energy consumption, uses no freon and is specially sealed to allow for quiet and ultra-efficient operation. "It keeps food really fresh and only costs about \$2 per month to run," says Cyndee. "But it was hard to find: We did a lot of research and ended up ordering it over the internet from Oasis Montana in Stevensville, Mont., and having it shipped here."

**The rainwater-collection system:** The McDaniels embraced rainwater catchment, an ancient practice that is still prevalent in Latin America and Asia. Their home's rooftops have a gentle slope that allows rainwater to fall off into canales (spouts that protrude from the roof), which then deliver it to 850-gallon stock tanks, where it's stored and later used for watering the native plants in the yard surrounding the house.

**The bamboo flooring:** The vertical-grain bamboo floor covering the house's staircase and second story is harvested from managed growth areas in China, where it regrows after it's cut. The bamboo is harvested every six years from the same plant, and is a harder wood than both red oak and rock maple. "When we were building the house, TimberGrass in Seattle had just started importing bamboo," says John. "We had to have it shipped down here because nobody in Central Oregon carried it. It's amazing how the industry has changed since then."

**The insulation:** When the McDaniels were looking for something to fill their walls, eco-friendly cotton insulation wasn't available. "But Owens Corning had just come out with a new formaldehyde-free fiberglass insulation," says Cyndee, "which at that time was unheard of." —E.D.







The McDaniels' home is flooded with natural light and filled with natural materials. The master bathroom (above left) features a tub set in limestone and a door that opens to the outside. The entry (above right) includes a staircase with bamboo treads and an 1900-era upright piano that's been in Cyndee's family since she was a child. The breezeway and back patio (below) overlook the couple's 5-acre spread, including a rustic firepit made from stones they found on the property.



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STAYING IN ONE PLACE IS A rather foreign concept for the McDaniels, self-proclaimed "gypsies" whose wanderings have taken them all over the world. In 1989, they were living on a houseboat in Portland when they decided to sell everything and travel the world. The odyssey lasted three years, and they eventually landed in Bend, Ore., where they rented a house and started a climbing guide service, taking groups to Nepal, Southeast Asia, South America and various places in the United States.

When they decided to build a house, they knew that sustainable construction was as much a priority as finding big open views. Their interest in environmental activism stems from their passion for rock climbing. Among other things, they started the Smith Rock Group, a preservation and restoration group for Smith Rock, one of Central Oregon's premier climbing destinations, not far from their home.

In search of a piece of land with beautiful vistas, they'd almost given up on Central Oregon when their real estate agent suggested they look at a 5-acre parcel in the Crooked River Ranch area. "The day we first saw it, it was cold and foggy," says John. "We couldn't even see the fields ahead of us. But we knew what the view was out there. It's kind of like everything else in life: You just know."

They enlisted architect Cheryl Heinrichs of Cheryl Heinrichs Architecture in Bend, Ore., to help them create a house with a footprint that would be small enough to have minimal impact on the land. Among other things, that meant creating a second story for an office and a guest bedroom rather than having a sprawling single-story home. They also wanted the house to have a strong connection to the outdoors.

"Our special places have always been outdoors," Cyndee says. "So



Natural light floods the McDaniels' master bedroom, thanks to windows that overlook the deck and the Cascade range. Cyndee's grandmother made the quilt in the 1940s.

when we talked to Cheryl about how to design the house, we said, 'We want to live outside in and inside out.'"

Heinrichs, who specializes in green architecture, says that familiarizing herself with the McDaniels' property was an important first step. "I believe that fitting a home to the land around it is imperative to creating a well-designed home," says the architect. "Since Cyndee and John's lot is special, with desert plants and views and rock formations, we spent time getting to know the land so we could create a home that specifically works with it."

The house was sited and laid out to maximize solar gain while impacting the land as little as possible. As part of that passive solar design, the main wall

of windows in the living and dining rooms faces southwest in order to take in the view and take advantage of the sun's heat in winter, keeping the house at a comfortable 70 degrees on most days.

An energy-efficient radiant heating system provides heat in the winter. "The floor is almost 12 inches thick and it's sitting on rock, so once you heat that mass—and we get a lot of help from the winter sun—it doesn't take much to heat the house," John says. "It's great to walk out in the morning barefoot when there's a couple of inches of snow on the ground on the other side of the glass and your feet are warm."

In the summer, very little direct sun comes in through the wall of windows since the sun is directly over the house.



Even on the hottest days, the house stays at about 80 degrees, no matter how high the mercury rises outside. The stairwell in the center of the house creates a "cooling tower." First floor windows, which awnings shield, work with the operable skylights to pull in cool air while letting warm air escape. A fan between the two skylights aids the process.

The thickly insulated walls help the heating and cooling efforts, and make an already quiet natural setting even quieter. "If we had chosen to build with standard stick-construction, during storms the noise from the wind would be very loud," says John. "As it is, our house is like a fortress or a bunker—we don't hear a thing."

**CREATING A NONTOXIC HOME** was another concern for the couple. Cyndee, whose job entails teaching about environmental air pollution, was particularly passionate about finding products that were free of harmful chemicals. This wasn't easy for the McDaniels, who were designing their home in 2001, when such products were hard to track down.

"We'd call to ask about a product and say, 'We're building a house. What are the ingredients in this product and is there a nontoxic alternative?'" says Cyndee. "That became a common conversation. I'd look at the ingredients and say, 'No, this won't work.' I'm a community health nurse and I'm not going to put toxins into the environment that can cause asthma and illnesses."

She eventually tracked down zero-VOC paints and formaldehyde-free insulation, as well as formaldehyde-free bamboo flooring.

The McDaniels saved money where they could. They used inexpensive ceramic tile on the main floor and skipped the Japanese soaking tub in favor of a less expensive fiberglass soaking tub. But they splurged on some of the interior finishes, such as the limestone that lines the master bath,

**"The way the decks step down and the paths curve around the house through the natural landscaping makes the house feel very connected to the land," says Heinrichs.**

the cherry cabinets in the kitchen and master bath, and the bamboo flooring that tops the stairs and the floors in the office and guest room upstairs.

The greatest luxury, however, is the home's proximity to nature. Large windows and sliding glass doors in the living and dining rooms and the master bedroom open onto a deck, which provides extra living space in the warmer months. A portal (a covered outdoor area that also acts as a breezeway) provides coverage during rainstorms, when the couple likes to sit by a fire in their built-in firepit and watch the lightning. From the deck, they can see Mt. Jefferson, Three Fingered Jack, Black Butte, Mt. Washington, the Three Sisters, Broken Top and Mt. Bachelor.

"The decks sit at varying levels so chairs can sit on the lower level, and when you are inside you can see over them to the plants and the views," says Heinrichs. "And the way the decks step down and the paths curve around the house through the natural landscaping makes the house feel connected to the land."

Will this spectacular setting put an end to the McDaniels' wandering ways? Don't bet on it. They are already making plans for the next phase of their life, which includes more globe-trotting and, perhaps, creating earth-friendly homes for other people.

"This was our creative endeavor and we hope to stay here for a long time," Cyndee says. "Hopefully we'll teach people that you can build a house that's earth-friendly and energy-efficient, even if you're not rich."

"But," she adds with a smile, gazing out the wall of windows toward the snowy peaks in the distance, "everything is open. Who knows what will happen tomorrow?" ■

Soon after they bought their land, the McDaniels built cairns to hold sticks on which they hung Tibetan prayer flags. "We wanted to get good energy coming in," says Cyndee. "We also burned juniper to say thank you to the land and promised we would be good protectors of it." Black Butte rises in the distance behind the couple's back porch.

