

The Michods' house, right, is 5,000 feet up a mountain, on the way to Sonoita. The wind generator sits higher on the hill, where it can catch a few breezes. Below, Rick takes 9-month-old Kristin for a closer look at the tepee where he and Carol lived before she was born.



## Hard work, tepee living create mountain home

Rick and Carol Michod never wanted to live in a tepee, nor take baths in a feed trough.

But after a year of listening to the traffic on Speedway and waking up at all hours of the night to the sound of sirens, they were eager to get out of town.

They started looking for land within an hour's drive of Tucson, and bought 40 acres high in the Empire Mountains on the way to Sonoita.

The canvas tepee they called home for almost a year was not intended to be their permanent dwelling. It was just a stopgap measure to give them time to build more spacious accommodations and enjoy a little

siren-free living in the process.

Rick says, "At first we wanted to buy an adobe and fix it up.

"Then we heard that people like ourselves could build a house."

When Rick says "people like ourselves," he is not implying that they have any mental or physical handicaps. He is an assistant professor in the department of ecology and evolutionary biology at the University of Arizona, and Carol is an associate computer programmer at IBM. What he means is that neither of them grew up learning to wire outlets around the house or pour concrete in the back yard.

Rick attended a seminar on building with adobe in Santa Fe, N.M., and it was there that he was introduced to the idea of living on the site in a tepee while working on his house.

And apparently it was a pretty good idea, at least for a while. Rick eagerly displays the photo album with pictures of the feed trough-tub, the incredibly compact kitchen, the sleeping area, and Carol's parents squeezed in the tepee during Christmas vacation.

With the wood stove going, the canvas-covered structure was comfortably warm during the winter, Rick says, but a little damp, what with that hole in the roof. Summer in the tepee was just about unbearable.

But what they lost in comfort they made up for in other ways. They saved the time it would have taken them to travel between a house in Tucson and the mountain site. On weekends, when it was time to get to work, they just tumbled out through the door flap and grabbed a trowel.

The work went on every weekend for a year, Rick says. But Carol remembers a time when they fell down on the job. They took off two days for Rick's sister's wedding.

The Michods designed their house by drawing chalk marks on the ground. Then, they walked in and out of the make-believe rooms, gazed out of the imaginary windows and generally got a feel for the place. If something didn't suit them, a quick scuff with a dusty shoe would clear the way for a new plan.

What they came up with was a home with two bedrooms, one bath, a study, a living room that overlooks the valley below, a kitchen and dining area.

The next challenge was to get 7,000 adobe bricks and 6,000 red bricks delivered from Tucson, not an easy task when the drop-off site is 5,000 feet up the side of a mountain. The cost of the deliveries also ate into the Michods' budget. The adobe bricks cost approximately \$3,500, but getting them up the mountain added another \$2,000 to the bill.

Initially, Rick was not concerned about the condition of the road or any problems the truck drivers might encounter while making deliveries. After all, he and Carol bumped up and down daily without incident. And even friends from the big city managed to make it to the top. "I think almost everyone we invited made it up here," he says. (Apparently a few didn't.)

The Michods distributed a map with precise directions showing the way to their house. The mileage from stump to wash to gate was marked off precisely. And a little advice also was included: "very bumpy; go slow but keep momentum." In other words, don't stop or stall or you could roll right off the mountain into the picturesque valley below.

The truck drivers who made it to the top appeared at the tepee shaking and ash-faced, Rick says. None returned with a second load.

Fortunately the Michods got all the materials they needed before they ran out of truck drivers.

As work progressed on the house, they found many of their friends enjoyed getting

out of town for the weekend and contributing a little labor. "Actually, that was one of the best things about building this house," Rick says, once again flipping through the photo album, as sunburned folks, wielding hammers and beer cans, grinned out from the pages.

But by the time a year had rolled by and Thanksgiving was approaching again, they were more than ready to give up the good life in the tepee and the fun of building their own house in the company of friends. A solid roof overhead looked awfully good, even if missing doors and windows created a few drafts.

They also were missing a few other conveniences, such as electricity, courtesy of the Tucson Electric Power Co. Running power lines to the house was estimated to cost \$8,000. So the Michods opted for a propane refrigerator and eventually installed a wind generator on the hill above the house. When a breeze blows, this modern version of the good old windmill stores energy in 54 2-volt batteries that are set up in the utility room. The generator, which cost approximately \$12,000, provides enough electricity to run the lights, television, stereo, small appliances, and even a minicomputer. The initial investment was large, but at least they won't be receiving any monthly electric bills.

For backup power, they have a propane generator that also runs the washing machine and the water pump.

Water was never a problem for the Michods. They were fortunate to find water just 100 feet down on their first attempt. Rick explains that unlike Tucson, water in the mountains collects in cracks and crevices. It is possible to drill just a few feet from a crack that contains a plentiful supply of water and come up with a dry hole. He says his neighbors have found themselves in exactly that predicament, having drilled several dry holes as deep as 600 feet. Without water, they have been unable to build on the land they purchased.

But even with lots of available water, the Michods are not wasting any of it. They installed a Swedish toilet that can be flushed with only three quarts of water, as opposed to five to seven gallons for a conventional toilet.

For heating, they have a wood-burning stove in the kitchen and dining area, and Count Rumford fireplaces in the living room and bedrooms. Rick says Rumford, a contemporary of Benjamin Franklin, designed the tall, shallow fireplaces that throw heat into a room, rather than sending it up the chimney.

What with all the doors and windows in place and the wind generator powering the computer, the Michods have few complaints about their new home. But Carol says she still has one regret.

If she wants to make a phone call, she has to go outside and sit in their pickup. And then she can only talk for three or four minutes before the operator breaks in and tells her to hang up. If someone calls her, there is no cheerful jingle to bring her running, but rather a blast of the truck's horn. For this convenience, the monthly bill on their mobile phone runs around \$80.

Mountain Bell said it would be happy to help her reach out and touch someone if she would kindly fork over \$125,000. But Carol decided she didn't need to reach out quite that much.



A tall, shallow fireplace provides warmth for the living room, top, while a wood stove, above, keeps the kitchen and dining area cozy. The wood used in the ceilings of the house was cut on Mount Lemmon.

Story by Linda Platts

Photos by Jim Davis

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