



Photographs by ROBERT DURELL *Los Angeles Times*

**A DIFFERENT FRAME OF MIND:** *Craig Calfee, who owns a bicycle shop outside Santa Cruz, works on a prototype of a bamboo bike he hopes eventually will be widely manufactured in Third World countries, where bicycles often provide accessibility to jobs.*

# Bamboo bike quite the offshoot

Ten years ago, a Santa Cruz shop owner's dog got him thinking. Now he hopes his concept will take root in Africa.

By J. MICHAEL KENNEDY  
*Times Staff Writer*

Funny where an idea will take you. Ten years ago, Luna the dog — part pit bull and part Labrador retriever — was gnawing on a piece of bamboo growing behind Craig Calfee's bicycle shop outside Santa Cruz.

On Sunday, Calfee was due to arrive in the West African nation of Ghana, intent on making bamboo bikes for the desperately poor.

Chew toy to bicycle. Whimsy to good deed. Santa Cruz to Ghana.



**A NATURAL BUILD:** *There is no need for power tools in constructing the bikes, an advantage in Third World conditions.*

where near finished. It's still anybody's guess whether something will come of this project.

Which brings us back to Luna, may she rest in peace.

Luna was adept at crushing wooden sticks with her powerful

and she'd chew it to splinters in no time. But the best she could manage with the hard, round stalks of bamboo was a tooth mark or two.

And that got Calfee to wondering: If bamboo was strong enough to withstand Luna, why

couldn't it be a bicycle frame?

Since then, Calfee has gone from building clunker bamboo bikes to fashioning sleek, pricey racing machines that turn heads in even the snobbiest pace lines. He's built 91 bamboo bicycles, enough for their reputation to spread across the country. And, perhaps as important, enough for Calfee to have faith in his unusual contraptions.

Craig Calfee is no ordinary bicycle shop owner. He's considered one of the country's elite bike builders, someone who creates machines for the likes of Greg LeMond, the first American to win the Tour de France. He fashions the lightest of bike frames from carbon fiber.

His shop is outside Santa Cruz, a community known for its laid-back style. His only link to the Third World is a long-ago trip to Africa. Yet somehow, more by accident than design, Calfee and

[See Bamboo, Page B8]



# From a sturdy grass, a new bicycle grows

[Bamboo, from Page B1]

his bamboo bikes may provide a means for rudimentary transport in the emerging world.

In a sense, Calfee is part of a bamboo craze sweeping the United States. Bamboo is suddenly chic, now that it's being made into everything from baby-soft T-shirts to baseball bats. Gone are the days when it was the stuff of cheap, ugly curtains and tacky lawn furniture. Bamboo has arrived.

"The uses are almost endless," said Dan Kee-sey, president of Gardena-based EcoDesignz, which sells everything from bamboo clothing to furniture. "You can eat off it, wear it and sit on it."

And sleep on it, eat with it, walk on it and fish with it, to name but a few other uses.

In Calfee's case, you can also ride it.

He still has that first bike he made a decade ago. He uses it to run errands around town but doesn't bring it to the shop much because a customer might get the wrong idea. The bike has a big split in the wood — which he's repaired — and its mustache handlebars aren't exactly state-of-the-art.

"A little rough" is how Calfee describes it — an experiment that worked well enough to tool around town. But the novelty was infectious, albeit on a small scale.

"I built a few more for friends," he said. "I was just playing around with it, not taking it seriously. But people started asking about them, so I decided to start offering them to the public."

He made one for an ex-girl-

friend in Tucson and another for a customer in San Francisco. He'd get e-mails from people looking to make an environmental statement. And word spread among hard-core riders that the bamboo bike cushioned road shock over long distances.

Among the believers was Ken Runyan of Emmett, Idaho, who owns a hardware and bike shop

long rides. And when he cracked the top tube of his frame, all he needed was Super Glue to patch it up.

"It's still kind of a gimmick bike," he said. "But I wouldn't have any qualms about selling it to anybody."

So word spread through Runyan and others that the bamboo bike was for real. Calfee

started thinking about his unusual form of transportation. The plant itself — a member of the grass family — was common throughout Asia and Africa. And bicycles, he knew, meant transportation, which often translates to jobs in the Third World.

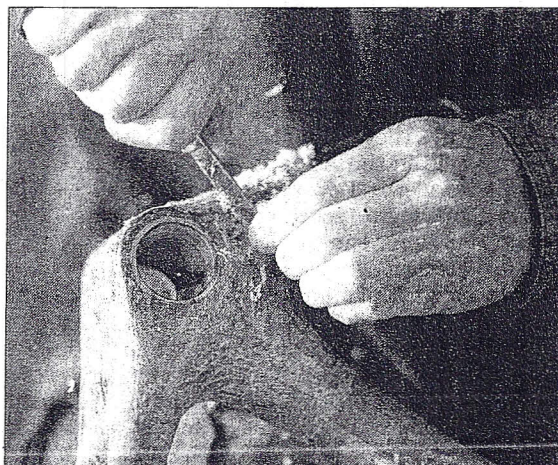
In somebody more energetic, Calfee's musings could have led to philanthropic solicitations. But Calfee's a bike guy from Santa Cruz. So instead he put a small item on his website, [calfeedesign.com](http://calfeedesign.com), saying that a bamboo bike could have some

value in developing nations, if someone took up the cause.

But that someone was not going to be him.

"I just had a feeling there were a ton of hoops I'd have to jump through," he said. "I figured if anyone was interested, they'd call me."

What he hoped for was a grant writer or sugar daddy to get the project going. The blurb linked to a Calfee-written paper outlining the virtues of bamboo bikes, including the availability of materials, the lack of need for electric tools, and increased mobility and access to jobs and markets. Included was a picture of a bamboo bike frame whose pieces are lashed together with hemp fi-



**CRAFT:** Calfee refines the bamboo frame. He also makes carbon fiber frames for top cyclists.

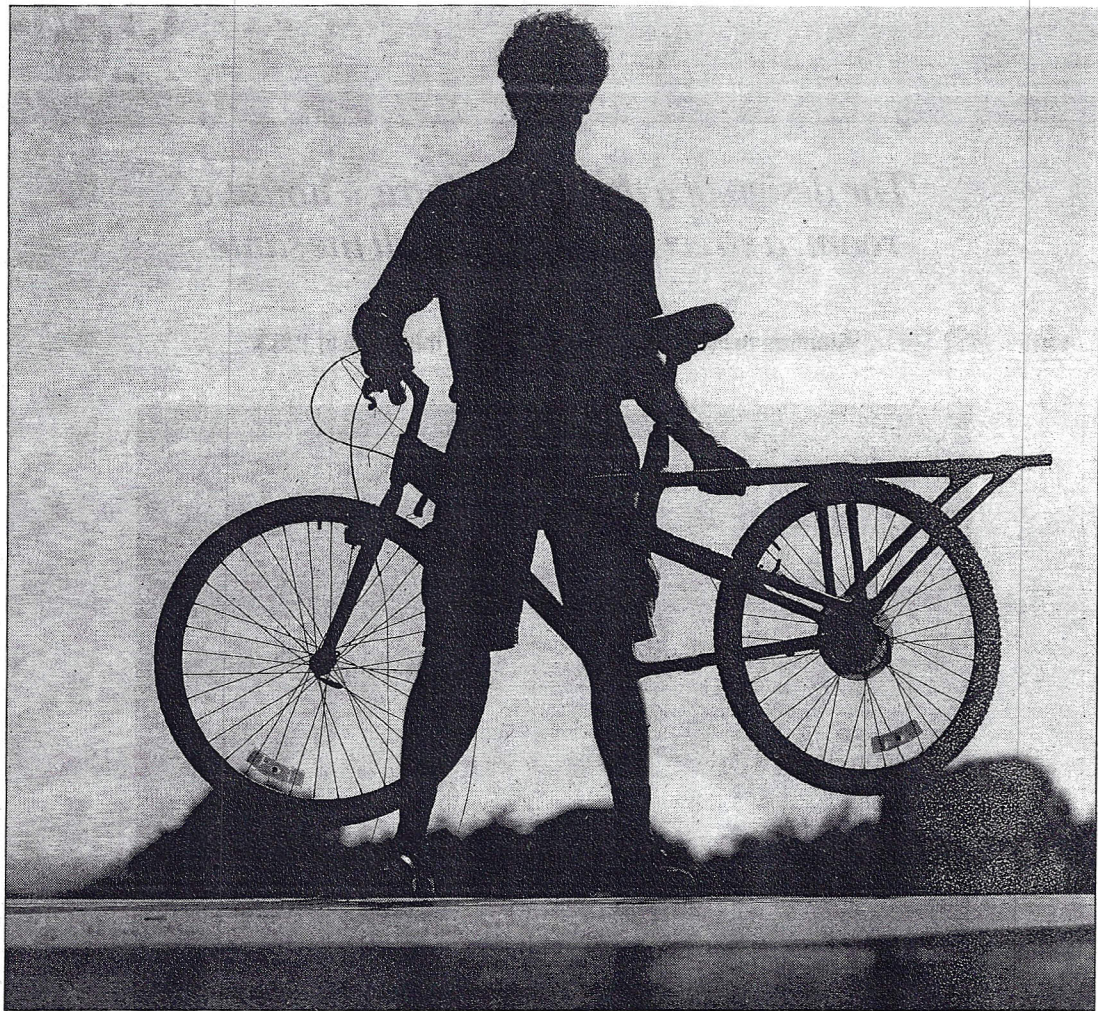
and saw Calfee's bamboo creation at a Las Vegas trade show. He ordered one to sell (the frames go for \$2,700), but ended up keeping it for himself. He found he liked it better than his other bikes.

"It's a great bike," said Runyan, 63, who rode it in Hawaii's Ironman triathlon last year. "The bike continually gets double takes and questions. People look at it and ask if it's really made of bamboo."

And, of course, there are the obligatory jokes: Keep it out of the rain so it doesn't sprout; use it for firewood if you get lost; you'll never lack for a toothpick.

But Runyan said he also noticed his times were faster on





Photographs by ROBERT DURELL *Los Angeles Times*

**GEARED UP:** Calfee shows off the finished bamboo bicycle at his manufacturing plant in La Selva, Calif. He's built 91 of the eco-friendly bikes, enough for their reputation to spread across the country.

ber. Calfee figured that sooner or later, someone with cash or connections would see the site.

Five or six people saw the website item and did call, but nothing happened. Then Calfee received an e-mail from David Ho, a hard-core cyclist from New York who was thinking about buying one of Calfee's custom carbon fiber bikes.

While he was on Calfee's website, Ho clicked on the bamboo bike link.

"He had some ideas jotted down about how bamboo bikes could be used in these settings and what the advantages might be," Ho said.

It happened that Ho worked for the Earth Institute of Columbia University, a nonprofit organization that focuses on sustainable development and the world's poor.

The two men discussed both carbon fiber bikes and bamboo bikes. Ho sent Calfee a copy of "The End of Poverty," written by the institute's director, Jeffrey Sachs, who is often cited as one of the major thinkers on Third World economies.

Calfee said he had "vaguely" heard of Sachs but "liked the ideas in the book. Ho started drumming up support within the

nanced this week's trip to Ghana for about \$25,000. Calfee, Ho and one other representative from the institute will be in the country for 10 days. They'll be living cheap to stretch their dollars, a good portion of which will be eaten up by airplane fares.

Ho thinks the short time should be enough to at least cover the basics, including talking to bamboo suppliers and lining up bicycle fanciers. They want to find people interested in making the bike frames, as well as sources for epoxy, resin and sisal — a fiber used for making rope, sacking and insulation. The bottom line, Calfee said, is to be able to make a frame without using power tools.

Said Ho: "The other part of our visit is to look in rural areas for what they are using for transportation and how to improve it." In particular, Ho said, he wants to focus on the special needs of women, because they often tend to crops, do the chores, control the money and need transportation.

One group Calfee and Ho used for advice in preparing for the trip is the Village Bicycle Project, based in the unlikely locale of Moscow, Idaho. The project has sent more than 12,000 bicycles to Ghana over the

tools and repair classes throughout the country.

David Peckham, the project director, has ridden bamboo bikes and describes them as "lovely." But he also said there are pitfalls, even in Ghana, where the official language is English and bicycles are common.

"I can't say whether or not this is going to work," Peckham said. "As far as I know, they are going for 10 days. I think this is a terribly short amount of time to get something done. Also, they don't seem to grasp how slow everything goes and how hard it is to get something done."

Among other difficulties they could encounter, Peckham said, is that although bicycles come into the country duty-free, there is a tax on parts, which could raise the price of assembly.

Calfee says he's no Pollyanna and realizes there will be pitfalls, including the ones Peckham cited. But he also thinks success in Ghana could mean success in other places. And they've got to start somewhere.

"It's very much in the beginning stages," he said. "We might fail miserably. But it might just take."

All because of Luna and her bamboo chew toy.