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Solar Flashlight Lets Africa's Sun Deliver the Luxury of Light to the Poorest Villages

By WILL CONNORS and RALPH BLUMENTHAL

FUGNIDO, Ethiopia — At 10 p.m. in a sweltering refugee camp here in western Ethiopia, a group of foreigners was making its way past thatch-roofed huts when a tall, rail-thin man approached a silver-haired American and took hold of his hands.



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A Houston oilman brought the solar flashlight to Fugnido camp

The man, a Sudanese refugee, announced that his wife had just given birth, and the boy would be honored with the visitor's name. After several awkward translation attempts of "Mark Bent," it was settled. "Mar," he said, will grow up hearing stories of his namesake, the man who handed out flashlights powered by the sun.

Since August 2005, when visits to an Eritrean village prompted him to research global access to artificial light, Mr. Bent, 49, a former foreign service officer and Houston oilman, has spent \$250,000 to develop and manufacture a solar-powered flashlight.

His invention gives up to seven hours of light on a daily solar recharge and can last nearly three years between replacements of three AA batteries costing 80 cents.

Over the last year, he said, he and corporate benefactors like <u>Exxon Mobil</u> have donated 10,500 flashlights to <u>United Nations</u> refugee camps and African aid charities.

Another 10,000 have been provided through a sales program, and 10,000 more have just arrived in Houston awaiting distribution by his company, SunNight Solar.

"I find it hard sometimes to explain the scope of the problems in these camps with no light," Mr. Bent said. "If you're an environmentalist you think about it in terms of discarded batteries and coal and wood burning and kerosene smoke; if you're a feminist you think of it in terms of security for women and preventing sexual abuse and violence; if you're an educator you think about it in terms of helping children and adults study at night."

Here at Fugnido, at one of six camps housing more than 21,000 refugees 550 miles west of Addis Ababa, the Ethiopian capital, Peter Gatkuoth, a Sudanese refugee, wrote on "the importance of Solor."

"In case of thief, we open our solor and the thief ran away," he wrote. "If there is a sick person at night we will took him with the solor to health center."

A shurta, or guard, who called himself just John, said, "I used the light to scare away wild animals." Others said lights were hung above school desks for children and adults to study after the day's work.

Mr. Bent's efforts have drawn praise from the United Nations, Africare, <u>Rice</u> University and others.

Kevin G. Lowther, Southern Africa director for Africare, the largest American aid group for Africa, said his staff was sending 5,000 of his lights, purchased by Exxon Mobil at \$10 each, to rural Angola.

Dave Gardner, a spokesman for Exxon Mobil, said the company's \$50,000 donation in November grew out of an earlier grant it made to Save the Children

to build six public schools in Kibala, Angola, a remote area of Kwanza Sul Province.

"At a dedication ceremony for the first four schools in June 2006," Mr. Gardner said in an e-mail message, "we noticed that a lot of the children had upper respiratory problems, part of which is likely due to the use of wood, charcoal, candles and kero for lighting in the small homes they have in Kibala."

The Awty International School, a large prep school in Houston, has sent hundreds of the flashlights to schools it sponsors in Haiti, Cameroon and Ethiopia, said Chantal Duke, executive assistant to the head of school.

"In places where there is absolutely no electricity or running water, having light at night is a luxury many families don't have and never did and which we take for granted in developed countries," Ms. Duke said by e-mail. Mr. Bent, a former Marine and Navy pilot, served under diplomatic titles in volatile countries like Angola, Bosnia, Nigeria and Somalia in the early 1990s.

In 2001 he went to work as the general manager of an oil exploration team off the coast of the Red Sea in Eritrea, for a company later acquired by the French oil giant Perenco. But the oil business, he said, "didn't satisfy my soul."

The inspiration for the flashlight hit him, he said, while working for Perenco in Asmara, Eritrea. One Sunday he visited a local dump to watch scavenging by baboons and birds of prey, and came upon a group of homeless boys who had adopted the dump as their home.

They took him home to a rural village where he noticed that many people had nothing to light their homes, schools and clinics at night.

With a little research, he discovered that close to two billion people around the world go without affordable access to light.

He worked with researchers, engineers and manufacturers, he said, at the Department of Energy, several American universities, and even <u>NASA</u> before finding a factory in China to produce a durable, cost-effective solar-powered flashlight whose shape was inspired by his wife's shampoo bottle.

The light, or sun torch, has a narrow solar panel on one side that charges the batteries, which can last between 750 and 1,000 nights, and uses the more efficient light-emitting diodes, or L.E.D.s, to cast its light. "L.E.D.s used to be very expensive," Mr. Bent said. "But in the last 18 months they've become cheaper, so distributing them on a widespread scale is possible."

The flashlights usually sell for about \$19.95 in American stores, but he has established a BoGo — for Buy One, Give One — program on his Web site, BoGoLight.com, where if you buy one flashlight for \$25, he will buy and ship another one to Africa, and donate \$1 to one of the aid groups he works with.

Mr. Bent, who is now an oil consultant, lives in Houston with his wife and four young children. When he is not in the air flying his own plane, he is often on the road.

Traveling early this month in Ethiopia's border area with Sudan, Mr. Bent stopped in each town's market to methodically check the prices and quality of flashlights and batteries imported from China.

He unscrewed the flashlights one by one, inspecting the batteries, pronouncing them "terrible — they won't last two nights."

On his last day along the border, Mr. Bent visited Rapan Sadeeq, 21, a Sudanese refugee who is something of a celebrity in his camp, Bonga, for his rudimentary self-made radios, walkie-talkies and periscopes.

The two men huddled in the hut, discussing what parts would be needed to power the radio with solar panels instead of clunky C batteries. "Oh, I can definitely send you some parts," Mr. Bent said. "You can be my field engineer in Ethiopia."

Will Connors reported from Fugnido, Ethiopia, and Ralph Blumenthal from Houston.