



On the Wings With Monarchs

THE MONARCH BUTTERFLIES HAD arrived by the millions at their wintering grounds in Michoacán, Mexico, on November 3, 2005, when Francisco “Vico” Gutiérrez touched down his ultralight plane on a stretch of two-lane highway near the Sierra Chincua monarch reserve. For 72 days Gutiérrez had accompanied the monarchs on their migration, from Montreal to Michoacán, logging 4,375 miles and drawing attention to the numerous threats they face as they travel across North America. The 44-year-old ultralight pioneer and filmmaker called it the journey of the *papalotzin*, which means “royal butterfly” in Nahuatl, the Aztec language. By that final landing in Mexico, the world was watching. Hundreds of people greeted him, including local schoolchildren, the international press, and a Mazahua Indian chief, who placed a garland of fresh marigolds around Gutiérrez’s neck in welcome and thanks. “It’s not just about the monarchs,” Gutiérrez said later, his curly hair framing a tender, tanned face. “It’s about all of us learning to live together, with each other and the earth.”

Gutiérrez’s love of flight has long been matched by his fascination with monarchs. Each fall the butterflies travel south, some fluttering more than 2,000 miles to the same mountainous patch of oyamel (a kind

of fir) forest in central Mexico, where the perfect combination of elevation, temperature, and humidity helps the butterflies survive the winter, in 12 main colonies. Six years ago Gutiérrez began fantasizing about joining the monarchs on their southward journey. Last year his dream came true.

He placed colored stickers on the wings of his 420-pound ultralight that resembled the distinctive orange-and-black markings of *Danaus plexippus*, and embarked with a ground crew of photographers and videographers from Montreal last August 22. They filmed the entire journey—funded by the World Wildlife Fund, Telcel, and the state of Michoacán—and are now producing a one-hour documentary that is expected out by June and will be shown at international film festivals.

Gutiérrez made dozens of stops along the way, meeting legendary lepidopterists and backyard biologists. Everywhere the *papalotzin* team went, they talked about the risks that monarchs face in Canada, the United States, and Mexico from pesticide use and habitat loss to illegal logging. They urged coordination, conservation, and protection across borders. “It’s time for humans to change our attitude to nature,” Gutiérrez says. “The butterfly can teach us a lot. If we save the monarchs, we save ourselves.”

that converts paint waste into electricity. It works by putting superconcentrated paint solvents into a Stirling (combustion) engine. The pilot program was first tested in 2003. It worked well enough that this fall a 55-kilowatt-per-hour system was installed at a Ford truck plant in Wayne, Michigan, where it currently handles 37 percent of solvent waste in one of three paint lines. Since the electricity generated powers less than one percent of the plant, it prevents the emission of 700 tons of carbon dioxide a year. Because the new technology is cheaper to produce, operate, and run, it is expected to be phased in at all of Ford’s North American assembly plants.—*Jesse Greenspan*

Sunny Side of Coffee

Environmentally friendly coffee is all the rage these days. Consumers in search of a “greener” cup of Joe have a variety of shade-grown, pesticide-free brands to choose from, including one sold by Audubon (www.audubon.org/market/licensed/coffee.htm). Now Solar Roast, an Oregon-based company, is going its competitors one better: It roasts its (organic) beans using only the sun’s energy. The company’s device, dubbed Helios 2.0, uses 138 square mirrors to draw light into a roasting bin that heats the drum roaster to 600 degrees Fahrenheit. No fossil fuels are burned to run the bin, and thus no greenhouse gases are emitted. One of the company’s prototypes, Helios

