Pigeon-Scientists? They Just Wing It

As part of a technology-and-art project that was the idea of a UC Irvine assistant professor, tiny backpacks and cellphones will help the birds transmit smog data.

By Roy Rivenburg, Times Staff Writer
August 10, 2006

Pigeons wearing tiny backpacks and cellphones will roam the skies of Northern California this weekend as part of an unusual art project.

Equipped with miniature smog sensors, the birds will transmit air pollution data to a "pigeon blog" website.

Beatriz da Costa, an assistant professor of arts, computation and engineering at UC Irvine, brainstormed the idea as a playful way to get people thinking about the health hazards of smog.

Despite protests from animal-rights activists, the first flock of feathered aviators took off Tuesday evening for a 30-minute smog reconnaissance mission over the Silicon Valley. A second flight is scheduled for Saturday.

The airborne art expedition is part of ZeroOne San Jose, a weeklong showcase of technology and art that includes a robotic willow tree, a karaoke ice cream truck and a laughing bicycle.

Da Costa's entry was inspired by a century-old photo of a homing pigeon wearing a tiny spy camera. The birds have a long history of military service — and some received medals for their World War II heroics.

Now, pigeons have entered the Digital Age. Da Costa and two graduate students spent a year developing bird-sized cellphones, GPS tracking devices and air pollution monitors. (Sorry, still no sign of a pigeon iPod.)

The featherweight gadgetry fits inside a spandex backpack originally designed by a Colorado river-rafting company that employs pigeons to carry rolls of film back to civilization during wilderness tours.

Each smog-sniffing backpack weighs less than 10g of a pigeon's body weight and costs $250. Da Costa said. Measurements of carbon monoxide and nitrogen oxide are relayed to Earth via pigeon cellphone and posted at pigeonblog.mapyourcity.net.

A Southern California pigeon launch is set for Aug. 18 in Irvine, Da Costa said.

The use of bird backpacks has drawn fire from People for the Ethical Treatment of Animals.

In a letter to UCI Chancellor Michael V. Drake last week, PETA said the "heavy and cumbersome equipment" strapped to Da Costa's racing pigeons could cause "injury and exhaustion for the birds."

UCI officials defended the project, saying it was reviewed by an animal ethics panel and deemed harmless.

Da Costa said she was bewildered by PETA's rebuke. "PETA is doing important work, but they should focus on people who really are abusing animals," she said. Complaints about pigeon backpacks are why the group "is not taken very seriously anymore," she said.
Bird experts at Cornell University's Lab of Ornithology also said the protest seemed overblown. "Racing pigeons are high-performance athletes that can almost certainly sustain this additional load with no harm," lab spokeswoman Patricia Leonard said.

But, she added, "it would probably be best to let each bird rest for a few days between loaded flights."