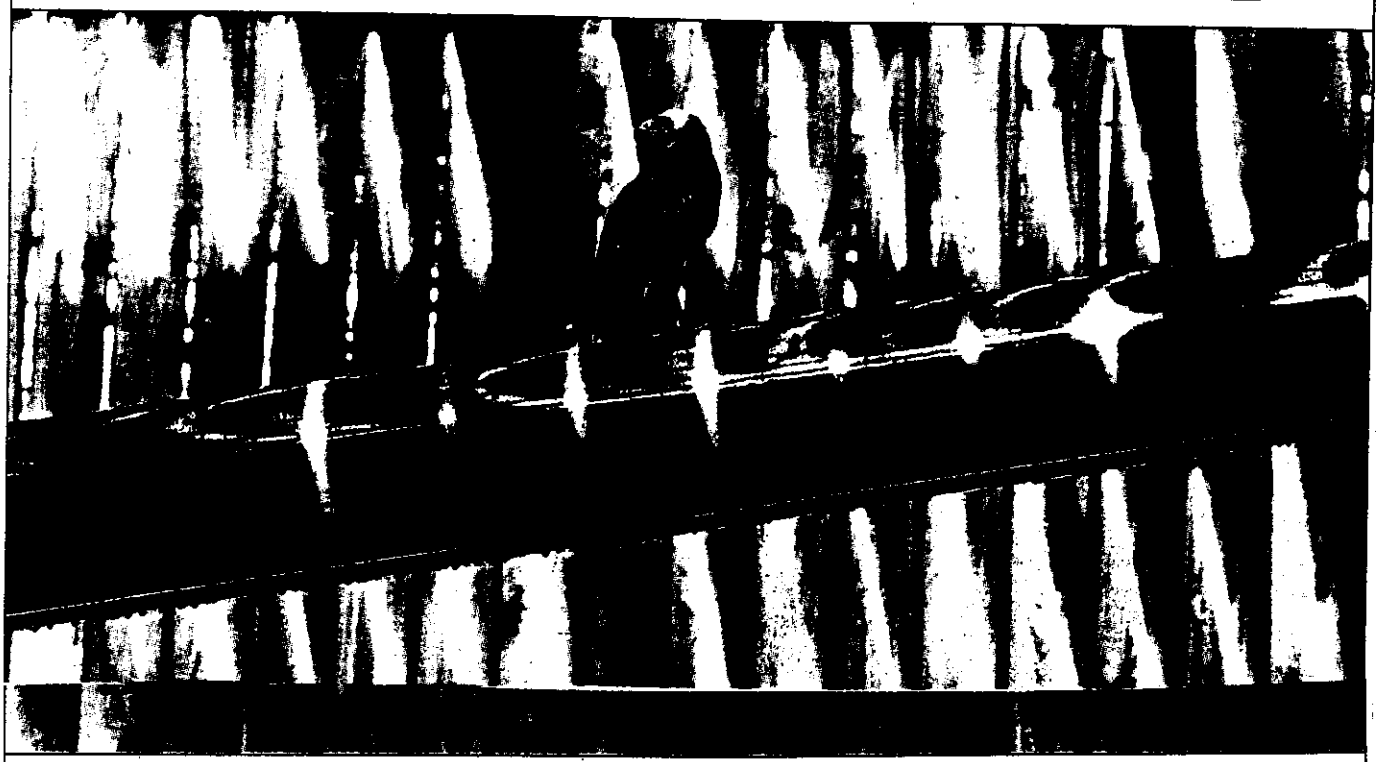
 Miami Herald - 6/10/01

BIRDS CAUSE TROUBLE FOR FPL



MARICE COHN BAND/HERALD STAFF

NEVERMIND: Engineers thought a fiberglass coating might keep birds of prey off power lines. A red-shouldered hawk at the Miami Museum of Science proves otherwise by sitting on a rail made of the material.

Museum helps find a solution

BY CHARLES FORELLE
cforelle@herald.com

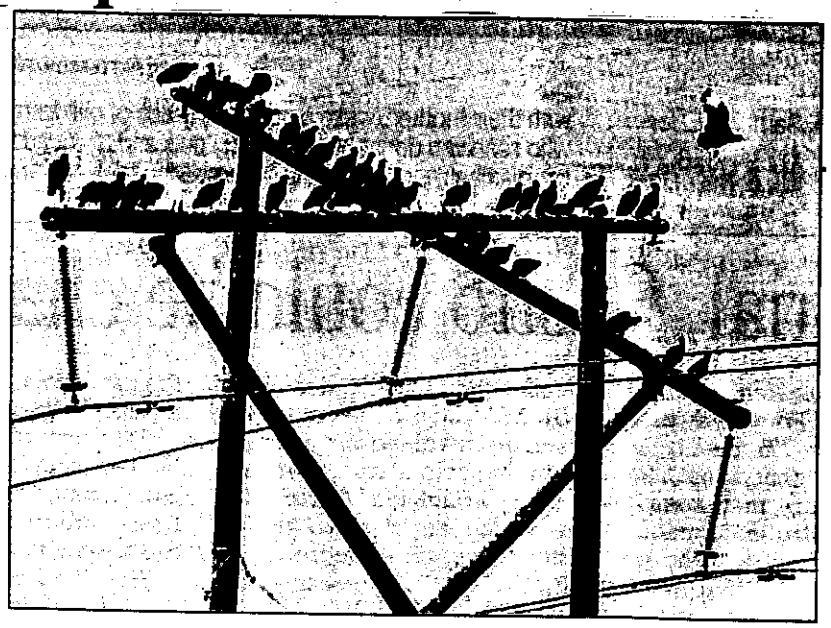
In California, it's a deregulation experiment gone awry that's shutting off the lights. In Florida, it's bird droppings.

Birds of prey that frequent Florida's electric towers are the chief perpetrators of power failure for Florida Power & Light's seven million customers, accounting for more than a quarter of outages, FPL says.

The problem?

The big birds have big droppings. Long droppings, to be precise, that stretch out in continuous streams up to four, five or even six feet long. If one end of the strand hits an electric wire and the other the grounded tower, the line can short. FPL computers quickly fix the problem, but not before lights, computers and digital clocks in up to 55,000 homes flicker off for a moment.

But the engineers on FPL's avian droppings team may have a solution. With the help of biologists and hundreds of feathered guinea pigs at the Miami Museum of Science, they've developed prototype devices that seem to keep the birds out of striking distance of the company's 6,000 miles of transmission lines.



POPULAR HANGOUT: Vultures gather atop an electric tower. The birds' droppings can cause power outages.

In a flight cage at the museum's Falcon-Batchelor Bird of Prey

▶ PLEASE SEE BIRDS, 7B

Museum helps FPL deter birds

BIRDS, FROM 1B

Center, wildlife biologist Carlos Pages watches a red-shouldered hawk deftly land on a smooth fiberglass beam that spans the length of the cage. Pages shrugs. So much for coating tower arms with fiberglass.

"They are clever," Pages said. "These animals can adapt to a lot of weird things."

In another cage, a row of black plastic cones about six inches in diameter runs the length of a spare tower span arm that's been bolted to the cage wall. The two turkey vultures and two black vultures in the cage don't even try to land on it.

The cones are called "Xena cones," so named because they resemble the trademark bustline of TV's warrior princess, and they are among the most successful designs. The birds won't touch them.

FPL came to the Batchelor Center's director, Brian Mealey, in October 1999. The center rehabilitates injured birds and tries to release them into the wild.

"The main push behind working with them is to understand the behavior of the bird and try to come up with things that modify the structure so they won't sit on it," said Grace Polo Couret, an FPL reliability engineer. "They are so persistent, so it's hard."

The birds — particularly red-tailed hawks, eagles and ospreys — like the electric towers because they are high perches from which they can scan the fields below for rodents that would make a tasty meal.

Mealey said the FPL devices don't harm the birds. The devices discourage the birds from landing in spots within dropping distance of a tower but leave open other, safer perches.

The cones are a promising development. Birds don't like to land on pitched or unstable surfaces, and the steep walls of the cones are a strong deterrent. FPL has also experimented with the angle of their span arms; tests with the Batchelor Center showed that birds avoid arms angled up more than 35 degrees.

Alternative perching also works.

The birds can be lured to big perches far above the wires by the prospect of greater visibility.

The perches are high enough that the droppings break into pieces before they hit the wire.