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BALTIMORE INC.
Edited by Ken Ingleharr

Mike Morgan

Cranfield and Sarro: The penguin cause is “at the top of the list for personal satisfaction.”

Strictly for the Birds

By Michael Billings

Forget your Orioles and Ravens—among the world’s zoologists, Baltimore is best known for another feathered friend, the African penguin.

That’s thanks to the birdmen of the Baltimore Zoo, chief veterinarian Mike Cranfield and breed-master Steven Sarro, who have lovingly maintained the largest, healthiest colony of captive African penguins in the country—some 75 of the sprightly, knee-high creatures.

Somewhere along the way, Cranfield, 48, and Sarro, 45, have made the Baltimore Zoo the country’s foremost authority on Spheniscus demersus, one of 17 species of penguin in the world today. Now the two are sharing their expertise with conservationists on the birds’ native continent, hoping to save thousands of African penguins from avian malaria.

Avian malaria struck the Baltimore Zoo’s little band of 18 feathered pioneers soon after their arrival here in 1967.

Zoo veterinarians came to the rescue, learning to diagnose the often-fatal malaria with weekly blood tests and to treat it with a human malaria remedy. Baltimore's protocol became the model in caring for the birds, and our flock thrived. Today, two-thirds of the 600 African penguins in captivity in North America are descended from those first 18 Baltimore penguins.

Unlike the Antarctic's Emperor and King penguins, African penguins are warm-weather birds. Weighing in at roughly 3 kilograms and standing roughly 20 inches tall, they are native to rocky coastal islands off the southern tip of Africa. That's why the "tough little buggers" do well in Baltimore's steamy climate, says breed-master Sarro, a 15-year Baltimore Zoo veteran.

But nipping malaria in the bud wasn't good enough for zoo staff. The test-and-treat system "is quite a good program, except that it is extremely labor intensive," says Cranfield.

So about five years ago, Cranfield, Sarro, and the zoo's veterinary and avian departments began to search for a way to prevent the disease. With the help of researchers at Johns Hopkins University and the National Institutes of Health, they developed a vaccine that causes a penguin's own cells to replicate avian malaria DNA so that the bird will develop antibodies to the disease.

Then Cranfield and the other Baltimore researchers began to look for a larger population of penguins on which to test the vaccine's effectiveness. They found exactly what they were looking for at a penguin-rescue facility in South Africa.

Some 200 years ago, the native African penguin population on islands off the southern coast of South Africa and Namibia numbered three million. But because of overfishing of their feeding grounds, encroachment by humans, and most importantly, oil spills, only about 150,000 wild African penguins remain. The South African National Foundation for the Conservation of Coastal Birds rescues thousands of oiled penguins a year.

Unfortunately for the rescued penguins, the foundation's facilities are on the mainland—which, unlike their islands, harbors mosquitoes and avian malaria. So, many of the rescued birds die of the disease while being cleaned.

In December, the foundation flew in Cranfield and two other staffers, Walter Weis and Tom McCutchen, to begin a vaccine test. Cranfield will return in July to check the experiment's results.

Cranfield, an 18-year zoo veteran, ranks the cause "at the top of the

list for personal satisfaction."

"The project's come a long way," he says, "and we're actually following through on an important part of the zoo's mission statement, which is to help animals in the wild."

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