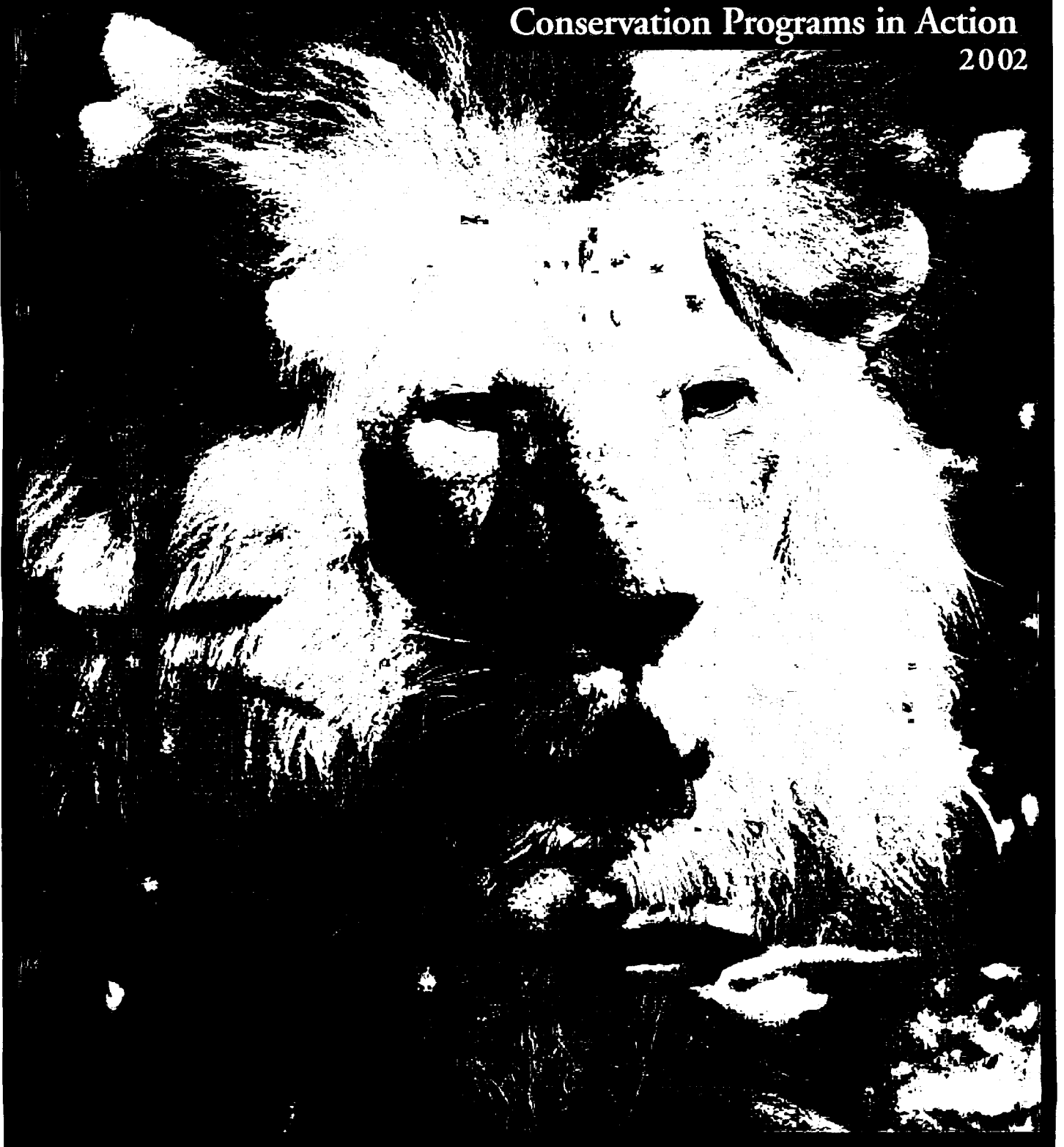


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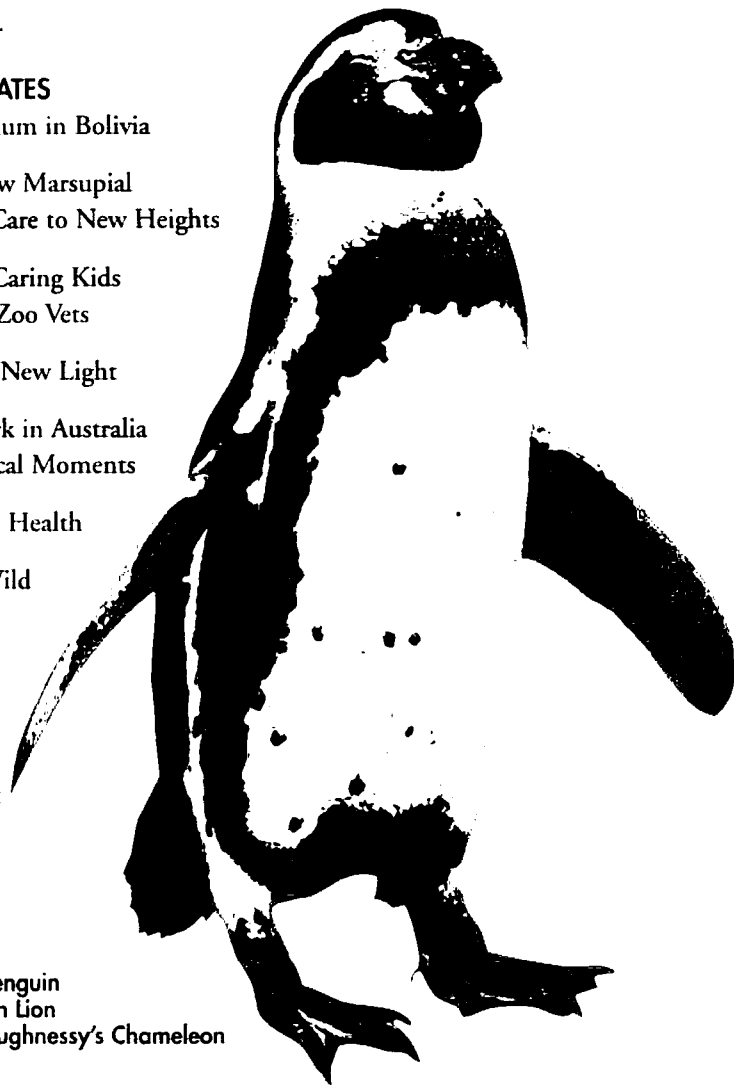
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Right photo: Humboldt Penguin
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Improving Rhino Health

Caring for animals in a zoo setting requires the utmost diligence—particularly when trying to determine the cause of animal health issues. As a leading authority on both captive management of black rhinos and animal nutrition, a natural alliance was born at Brookfield Zoo to investigate concerns about the role of diet in relation to syndromes that affect black rhino health.

Black rhino numbers in the wild have declined dramatically over just the last few decades. This drastically increases the urgency of maintaining healthy and sustainable zoo populations.

“Unfortunately, black rhinos in captive settings have shown a tendency to accumulate inappropriate body stores of iron over their lifetime,” says Dr. Sue Crissey, who heads Brookfield Zoo’s Nutrition Services Department. “This propensity may be associated with disease—and even death.”

Yet, iron is essential for the body functions of all animals; too little may be just as problematic as too much. The iron accumulation in black rhinos does not appear to be genetic or pathological—meaning it doesn’t pass along family lines or follow a specific disease pattern. This just adds to the importance of the investigations, because there is no way to predict which animals might become ill.

Supported by SOS Rhino and the International Rhino Foundation, Brookfield Zoo and Fort Worth Zoo’s nutritionists, veterinarians, and keepers—with the help of staff at Dallas Zoo, El Coyote Ranch, and Fossil Rim Wildlife Center—are in the midst of a multiyear study. Findings

will guide the development of a diet that aims to reduce the risk of iron overload in black rhinos.

What may be surprising is how little is known about how these animals handle nutrients. Experts speculate that the natural browse of free-ranging rhinos may be lower in iron than their diets in captivity, or may contain compounds (such as tannins) that bind the iron before it is absorbed in rhinos’ systems.

Brookfield Zoo and its partners began by examining a dozen rhinos at the zoos involved in the study. Over several months, the rhinos will be fed a series of different diets, which nutritionists have meticulously constructed. Researchers will analyze fecal and blood samples to see how the different compounds in each diet affect iron storage in the rhinos. As each new piece of information is revealed, results will be shared with rhino caregivers all over the world.



Brookfield Zoo’s nutritionists, veterinarians, and keepers are working with other zoos to develop a diet that reduces iron storage in black rhinos, saving them from a potentially toxic health problem.