



CRES

CENTER FOR REPRODUCTION OF ENDANGERED SPECIES

Cooperative Conservation

When it comes to large-scale propagation of endangered birds for recovery programs, nobody does it better than The Peregrine Fund. The Zoological Society of San Diego's Center for Reproduction of Endangered Species (CRES) and The Peregrine Fund (TPF) have formed a unique partnership in cooperative avian conservation. Participation by CRES staff involves both the pathology and behavior divisions in their collaboration at the World Center for Birds of Prey in Boise, Idaho, and at the Keauhou and Maui Bird Conservation Centers in Hawaii.

But even the best programs are occasionally faced with disease problems, because wherever animals are, diseases have a habit of popping up. The pathology division of CRES provides support for the conservation efforts of TPF by conducting disease investigations, designing outbreak containment strategies, and conducting research to mitigate the effects of disease on these conservation efforts. The wisdom of implementing such a cooperative arrangement in advance became apparent with the aplomado falcon recovery program in 1996.

The northern aplomado falcon is a small raptor that once roamed our southwestern grasslands but is now limited to scattered populations in northern Mexico. TPF has undertaken a recovery plan modeled after their successful approach for the recovery of the once critically endangered peregrine falcon. A breeding population of aplomado falcons has been established at TPF's World Center for Birds of Prey. The chicks produced there are reared to fledging age, then released in refuges in southern Texas. The success of this program is already apparent. In 1995, aplomado falcons nested in the United States for the first time in more than 40 years.

The recovery program experienced a significant setback in 1996, however, when chicks began dying without warning. A disease investigation was immediately conducted by CRES pathologists, revealing that an avian adenovirus outbreak was beginning. Emergency containment strategies were implemented—which ultimately arrested the outbreak—but not before nearly 60 chicks had died.

Attempts to isolate and further characterize the virus have been unsuccessful so far, but research continues as pathologists try to pin down the source of the virus and the means by which it gained access to the aplomado population.

Cooperative avian conservation efforts between CRES staff and The Peregrine Fund have led to a successful recovery plan for species like the aplomado falcon.

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REPORT

WINTER 1997

CRES is operated by the Zoological Society of San Diego.



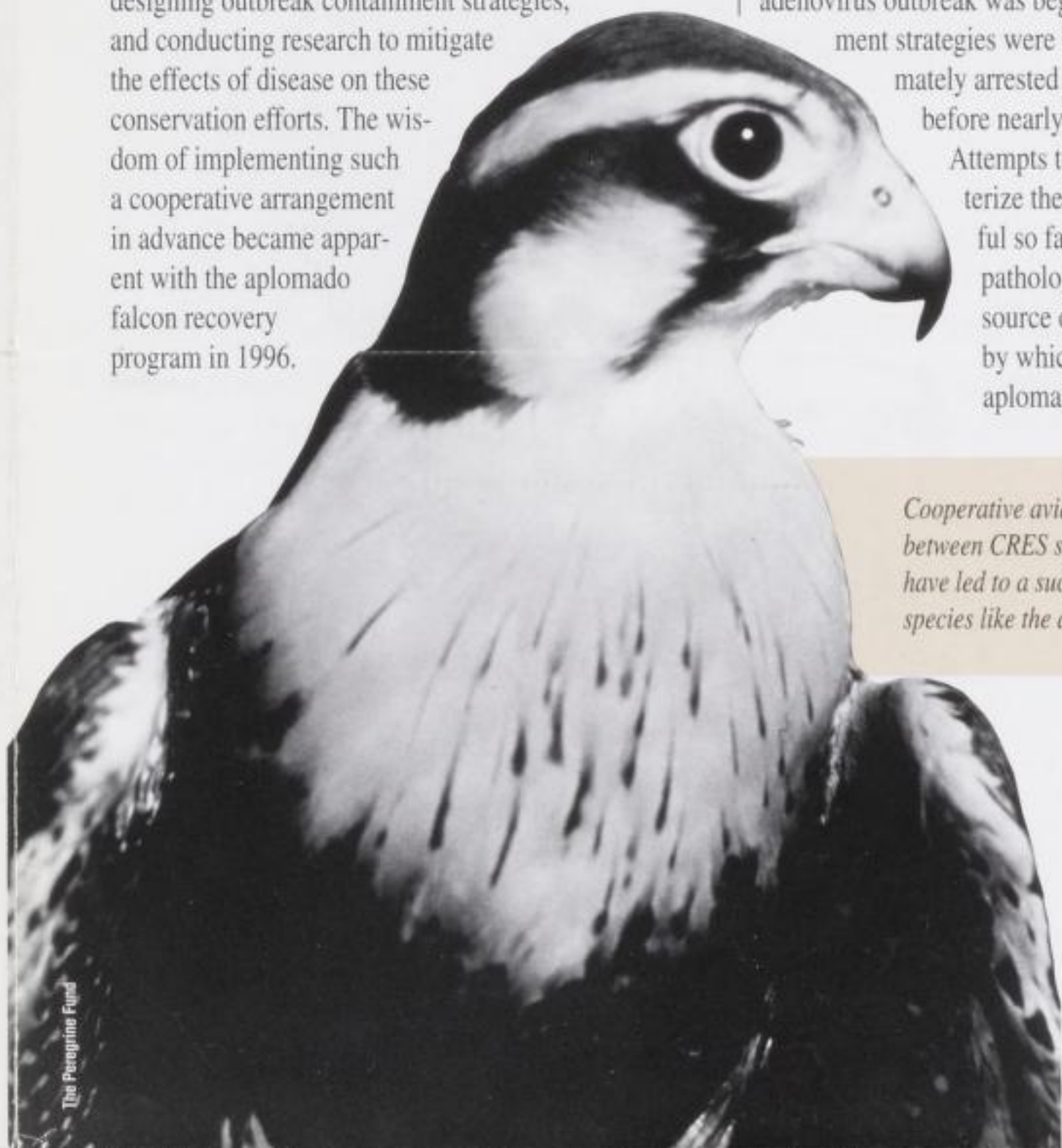
Black Rhino Calf
Virology studies to benefit black rhinos. See page 3.



Bonner Summer Student Fellows
College students work on CRES projects. See page 4.



Adopt a Rhino!
Holiday gifts that help CRES. See page 5.



The Peregrine Fund

Virology/ Immunology

As rhino populations decline worldwide, researchers are working with diseases that affect rhino species in captivity. In recent years, our understanding of the many factors involved in determining the resistance or susceptibility of a host animal to infectious agents has increased significantly. Some of these factors include the relative ratio of two types of white blood cells, genetic variation in specific immune response genes, and the presence of a gene that possibly determines which of two major types of immune responses an animal may produce upon infection. In addition, a minor change in the amino acid sequence of a protein found on immune system cells called macrophages may determine the relative level of natural resistance of a host



to some pathogens. In collaboration with Dr. Jeff Stott and Myra Blanchard, immunologists at the School of Veterinary Medicine on the University of California at Davis campus, we are beginning to investigate some of these

factors in the black rhinoceros. Some captive members of this species experience hemolytic disorders, fungal pneumonia, and immune complex disease. We believe that our efforts to understand just a few components of

the rhinoceros immune system will eventually provide information concerning the immune status of individuals with these diseases and possibly a stronger basis for genetic management of the captive population.

Humane From Hollywood Honors Dr. Heuschele

Hollywood stars and animal friends turned out on August 16, 1997, to honor CRES Director Dr. Werner Heuschele, as well as actors and directors who have worked on behalf of animal welfare and wildlife conservation. This was the second annual fund-raiser for Humane From Hollywood, which benefits The Wild Foundation, Cheetah Conservation Fund, and Shambala Preserve, a 60-acre wild animal habitat in Soledad Canyon, near Acton, California, that is maintained by actress and conservationist Tippi Hedren through the non-profit Roar Foundation.

With 50 years of service in the cause of wildlife, beginning with his days as a driver-guide at the San Diego Zoo in 1947, Dr. Heuschele was honored with a Distinguished Service Award. He became director of CRES in 1986 and has continued to work in the field of animal health and welfare and wildlife conservation worldwide.



Grants

The Center for Reproduction of Endangered Species is grateful to the following for their support of imperiled wildlife:

An **Anonymous** donor has made a grant in support of lion-tailed macaque behavioral research and repairs to the lion-tailed macaque corral at the Wild Animal Park. Trustee **Dr. Lee Monroe** and his wife, **Bobbie**, have made possible the purchase of a radio-controlled car that cheetahs can chase at the Wild Animal Park. The car will also be used in behavioral research of cheetah locomotion. The **L. J. Skaggs and Mary C. Skaggs Foundation** has made a grant in support of Dr. Barbara Durrant's work in conservation of endangered carnivores. Support for this research is also being provided by a grant from the **Morris Animal Foundation**.