



CRES

CENTER FOR REPRODUCTION OF ENDANGERED SPECIES

REPORT

WINTER 1992/1993

CRES is operated by the Zoological Society of San Diego.



Helena Fitch-Snyder
Animal Behavior Specialist/Supervisor.
See page 1-2.



Sumatran Rhino
Sumatran rhino reproduction is the focus of Dr. Lee Hagey's research.
See page 4.



Cheetah Communication
Scent marking as a form of communication.
See back page.

The Lion-tails of St. Catherine's Island

We are often asked about the ability of captive-born animals to survive in the wild. Release programs can be successful—if there is preparation beforehand. This is the story of a troop of lion-tailed macaques

"This is a critical time for many of the world's primate species . . ."

maintained by the Zoological Society of New York. Observations of this troop and the one at the San Diego Wild Animal Park will be compared and evaluated by CRES Animal Behavior Specialist Helena Fitch-Snyder.

Off the coast of southern Georgia lies St. Catherine's Island, some 10 by 1 to 3 miles in size, which is now home to 8 free-ranging lion-tailed macaques, an endangered primate species native to the wet forests of southern India. The island is ideal habitat for these arboreal primates and a good transitional home for the animals, which will one day be released into the wild. The troop of 6 males and 2 females, each fitted with a radio collar, was placed at the Wildlife

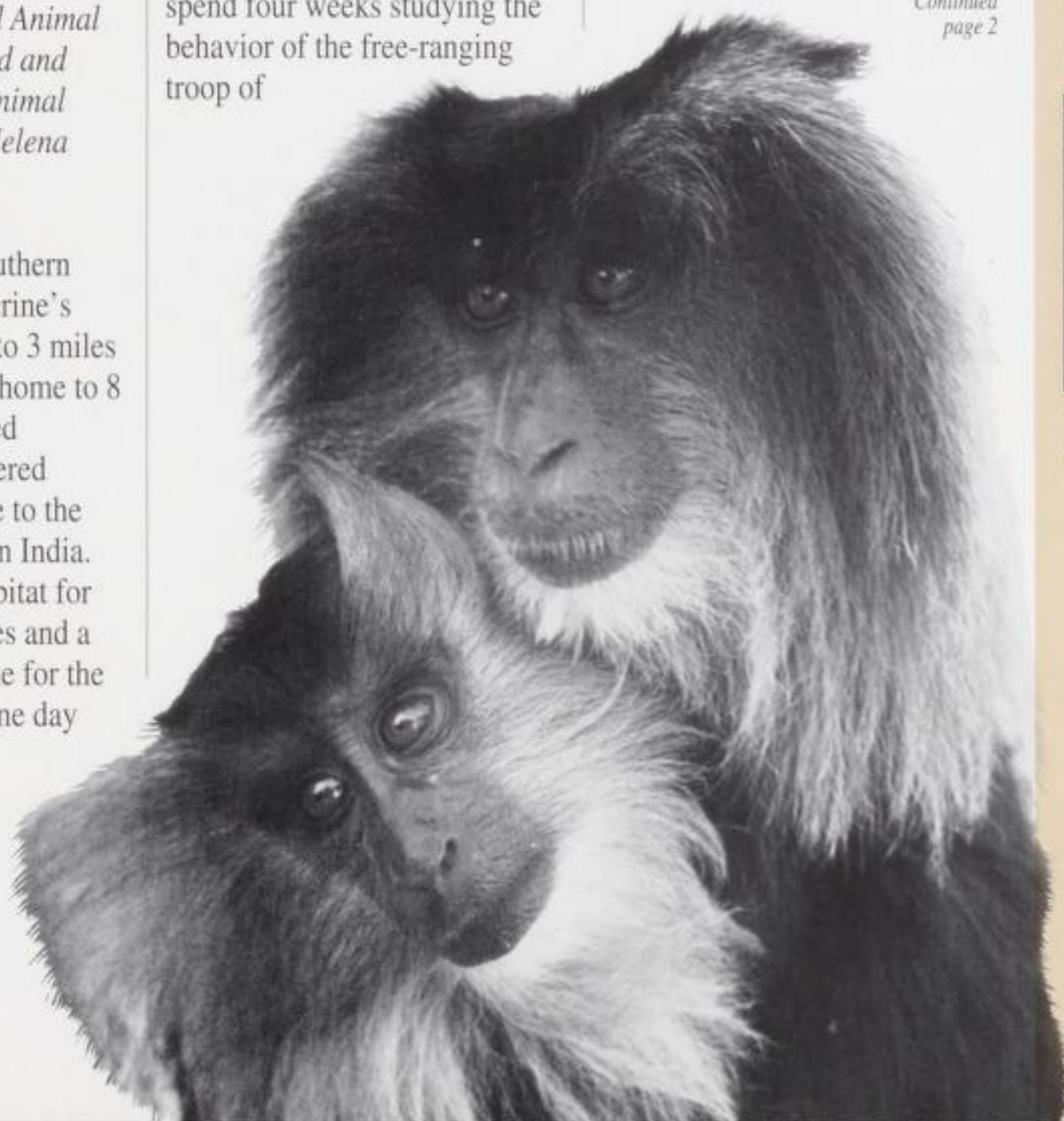
Survival Center by the New York Zoological Society in July 1991. A comparable troop is maintained off exhibit (begun in July 1989) at the San Diego Wild Animal Park by the Zoological Society of San Diego, where 5 males and 9 females live in a 3/4-acre kraal that includes trees, boulders, and a pool. Both programs are run in cooperation with the Lion-tailed Macaque Species Survival Plan (SSP), with the goal of future reintroduction into the wild.

During July and August 1992, I had the opportunity to spend four weeks studying the behavior of the free-ranging troop of

lion-tailed macaques on St. Catherine's Island, and it led to a valuable exchange of ideas between the two facilities. My studies centered on the social interactions of the 4 oldest—and presumably highest-ranking—males in the group. This behavioral data will be compared with 4 males of comparable age and social status from the Wild Animal Park's troop.

The foraging and ranging behavior of the troop was observed in its free-ranging environment on a subtropical island and the question was

Continued page 2



CRES 1993 "Wish List"

We need your help . . .

If your holiday spirit includes helping those who help endangered species, please take a moment to consider a holiday equipment gift to CRES. Your gift will make the future brighter for the Earth's vanishing wildlife species.

"To help the animals is our goal, indeed, however, CRES equipment is in need! Whatever you can do to help us this year, we would be most grateful and give a great cheer!"

Donors who would like to help can contact Amy Parrott in Development at (619) 685-3213, for information about any of the opportunities listed below.

- Video projection unit for behavioral studies, \$3,500
- VHS recording desk for behavioral studies, \$2,500
- 0.5 gallon, 120V, constant-temperature water bath for various cytogenetics and cell culture procedures, \$550
- Nikon photomicroscope accessories for cytogenetics projects, \$2,350
- MicroMedic Work Station for radioimmunoassays to quantify hormone levels, \$25,000
- Microtiter plate reader to perform enzyme-labeled immunoassays of hormones, \$8,000
- Expand computer capacity for DNA mapping, sequencing data analysis, and pedigree records, \$3,500

- Baxter Benchtop Centrifuge and accessories for serum collection and chemistry analysis, \$6,000
- Olympus BH2 binocular microscope with attachments for pathology examination, \$10,000
- 40 x D.I.C. microscope objective lens for visualization and examination of sperm and ova and the observation of *in vitro* fertilization, \$1,500
- Single-channel chart recorder for monitoring freezing steps for semen collections, \$2,000
- MacVector computer software package for analyzing raw data for sequencing DNA, RNA, nucleic and amino acids, \$2,750

Additional giving opportunities:

Postdoctoral Fellow Endowment, \$300,000

A naming opportunity that would provide funds for postdoctoral fellow on an annual basis in perpetuity.

CRES Conservator, \$25,000

Annual support for the CRES Endowment of \$5,000 a year for 5 years.

Chair Endowments, \$700,000 and up

Naming opportunities for individual disciplines that would provide funds for ongoing research in that area on an annual basis in perpetuity.

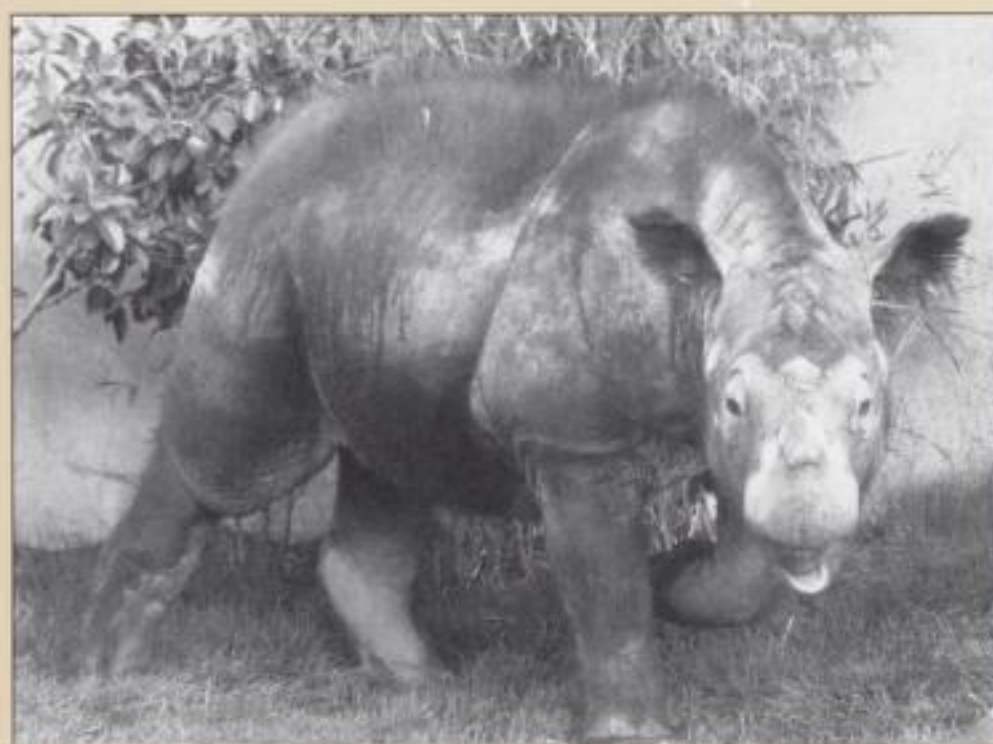
Thank you, and Happy Holidays from all of us at CRES!

DR. LEE HAGEY



UCSD Chemist Joins CRES Staff

Dr. Lee Hagey, a chemist at the University of California, San Diego (UCSD), has joined the endocrinology division at CRES as a postdoctoral fellow, supported by the Joan Irvine Smith and Athalie R. Clarke Foundation. This position is extremely important in our continued effort to understand rhinoceros ovarian function. As a noninvasive approach to monitor reproduction in the rhino, we measure urinary, fecal, and salivary hormones. Rhinos vary from species to species with respect to the types of hormones excreted. With his chemistry background, Dr. Hagey will provide expertise in identifying these different hormones and will be working with CRES Endocrinology Specialist Nancy Czekala. Monitoring of reproduction is essential for pregnancy detection, identification of the time of delivery, and for timed matings.



One of our primary goals during Dr. Hagey's tenure on this project is to develop techniques to assess the reproductive status of the endangered Sumatran rhino, of which fewer than 1,000 remain in the wild. We are currently obtaining samples from the four United States zoos holding the Sumatran rhino, as well as some Indonesian zoos. We are also collaborating with scientists currently doing an extensive field survey and fecal sample collections of the wild populations of this species. To discover if reproductive function is altered by captivity, the wild population study will be compared with that of Sumatran rhinos living in zoos. An attempt to make our captive environments as natural as possible may help to produce hormonal patterns in captive rhinos similar to that of free-ranging populations, and may ensure successful reproduction.