



SNOW LEOPARD CONSERVANCY

Annual Report 2007



Scientific study is crucial to conservation

In 1976 I made my first visit to the Himalaya and the realm of the snow leopard. It was an experience that forever tied my career to these amazing animals. For most of the past thirty years, in order to study snow leopards, I had to walk for weeks through the earth's highest mountains, tent camping in all seasons, out of communication with the outside world. All this for the reward of glimpsing wild snow leopards perhaps once a year. There have been years in which I have not seen a single leopard, so when I do spot one, it is always a heart-stopping experience.

In some ways, not much has changed since 1976. Snow leopards still live in remote and sometimes dangerous corners of the world. While we have clearly made progress in community-based conservation of the cats, much about their behavior and ecology remains locked in mystery. But such knowledge is critical to our ability to help them survive in the long term.

New technologies are changing the way we study these keystone creatures and may also change the way we act to conserve them. Where access is greatly restricted, costly or time-consuming, GPS-satellite collars can give us near real-time ability to monitor a snow leopard's position and movements from thousands of miles away. Remote cameras help us count *continued on page 2*



Mitchell Kelly

Snow Leopard Conservancy

18030 Comstock Avenue
Sonoma, CA 95476

Phone (707) 935-3851

Fax (707) 933-9816

www.SnowLeopardConservancy.org

A Program of the Cat Action Treasury
(www.felidae.org)

US Headquarters

Rodney Jackson, Ph.D., Founder-Director
Som Ale, Ph.D., Conservation & Research Program Director
Darla Hillard, Education Director
Joyce Robinson, Office Assistant

In-Country Staff

Nagendra Bhudathoki, Education Coordinator, Nepal
Chhimi Gurung, Mustang Program Coordinator, Nepal
Ghulam Wafi Shah and Ulfat Shah, Village Stewards, Pakistan

Advisory Board

Christine Breitenmoser-Würsten, Ph.D., International Union for the Conservation of Nature
Don Hunter, Ph.D., U.S.G.S.
Nandita Jain, Ph.D., Specialist in Environment and Development
Kristin Nowell, Cat Action Treasury
Camille Richard, Rangeland Ecologist
George Schaller, Ph.D., Wildlife Conservation Society
Mike Weddle, Former Science Instructor, Jane Goodall Environmental Middle School

SLC – India Trust

Rinchen Wangchuk, Director
Jigmet Dadul, Program Assistant, Ladakh
Tashi Thundup, Program Assistant, Zaskar
Tsering Angmo, Education Program Coordinator
Rigzin Chondol & Rinchen Angmo, Education Program Facilitators
Padma Dolma, Village Steward, Ladakh
Riju Raj Jamwal, Managing Trustee
Renzino Lepcha & David Sonam, Trustees
Darla Hillard, Rodney Jackson, Nandita Jain,
Sujatha Padmanabhan & Dilpreet Singh, Advisors
Gudrun Batek, Volunteer

Program Partners

American Himalayan Foundation, USA
Australasian Himalayan Foundation, Sydney
Dunai Boarding School
Ecotourism & Conservation Society of Sikkim
FabIndia Overseas Pvt. Ltd.
Hushey Village Conservation Committee, Pakistan
International Trust for Nature Conservation
Irbis Mongolia
Jammu & Kashmir Dept. of Wildlife Protection, India
Jane Goodall Environmental Magnet School, USA
Kalpavriksh, India
Kangchendzonga Conservation Committee, Sikkim, India
Khunjerab Village Organization, Pakistan
Mongolian Academy of Sciences
The Mountain Institute, USA
Murgab Ecotourism Association (META)
Muse, India
Nature Protection Team, Tajikistan
Project Snow Leopard, Pakistan
Snow Leopard Network, USA
Snow Leopard Trust, USA
Society For Environmental Education, Pakistan
Texas A&M University
U.S. National Park Service, Lassen Volcanic National Park
Wildlife Institute of India
WWF-Nepal
Xinjiang Conservation Fund

populations or monitor individual leopards. Through fecal DNA sampling, we can identify individual cats, and also establish their gender and the ratio of males to females. With a better estimate of how many remain in the wild, and where, we can focus our conservation efforts on the hot spots.

These research methods support conservation by a) helping us identify corridors of land used by snow leopards for moving between separated protected areas, and b) informing us where to maintain corridors linking the different populations to help ensure sufficient genetic diversity. Once identified, such corridors can be targeted and protected through community-based and other conservation measures.

One thing that has changed considerably is the degree of involvement and participation by local communities in snow leopard conservation.

The Conservancy has led the way in recognizing and respecting indigenous wisdom as a vital element in conservation. We have demonstrated that research, like conservation, isn't just for scientists with university degrees. Our community partners in Pakistan, Nepal and India are monitoring snow leopards and other wildlife using camera traps and CyberTrackers, blending high-tech tools with traditional knowledge.



Rumbak, Ladakh (12,465 ft., 3,000 m), India, in winter, the prime time for observing snow leopards

The Conservancy scientifically monitors the effectiveness of its programs in various ways to verify changed attitudes of local people about snow leopards. However, in March, 2007, we had a measure of success that can only be described as emotional and a harbinger of what is possible if we all work in concert.

I was having lunch with the eight ecotourists who participated in our Winter Snow Leopard Quest in a high snow-camp in Hemis National Park. Suddenly a herder from Rumbak village ran in breathlessly. He was so excited to tell us that he had seen a snow leopard on a kill down the trail. We dropped our lunch and ran as fast as we could, and yes, the cat was still there near a major trail. We watched until it got dark. (See photo page 4.) That sighting made the fifth consecutive winter that our team has seen snow leopards in this region. In the past, this herder might have quietly killed the predator he considered to be a pest; today, his first thought was to alert visitors to its presence.

Clearly the Rumbak community appreciates the connection between snow leopard research, conservation and their ability to earn money from ecotourism. They are also gaining a sense of ownership and pride in "their" animals and a stronger and more credible voice in the management of this part of Hemis National Park.

Rodney Jackson, Founder-Director
Snow Leopard Conservancy

Applying Science to Conservation

Camera Trapping

Camera trapping is a non-invasive means of counting populations and monitoring individual snow leopards. We train professionals and villagers to collect data.



Project Snow Leopard

Camera trapping in Krabathon Broq, Northern Pakistan

- Completed camera trap study in Mongolia. *See sidebar.*
- First remote snow leopard camera trap pictures from Mustang, Nepal, taken by a local team.
- Re-instituted camera trap monitoring of snow leopards in Hemis National Park, Ladakh, India, the “Snow Leopard Capital of the World.”
- Published a definitive *Snow Leopard Camera Trapping Handbook* in Chinese and distributed it to all six snow leopard states in China, as well as posting it on our website.

DNA Research

Through fecal DNA sampling, we can identify individual cats and also establish their gender and the ratio of males to females.

- With partner Texas A&M University, Jan Janecka, Ph.D., provided non-invasive genetics techniques to Dr. Y. Zhang of the Institute of Forestry, Beijing, China.
- Collected and analyzed over 100 scats from the Burhan Buddha Range in Qinghai, China, under an ongoing capacity-building and field survey partnership. The technique holds great promise as a means for determining the minimum number of snow leopards present, their gender and relatedness.
- Provided support to U.N. Development Program project and local biologists in China, Mongolia, Russia, Tajikistan and Pakistan to collect fecal DNA for a range-wide population survey. Supported in part by a National Geographic Society Research Grant to Texas A&M.

Camera trapping study in Mongolia

Rodney Jackson provided training in camera-trap surveys to Dr. B. Munkhtsog and staff of Irbis Mongolia and the Mongolian Academy of Sciences. Nineteen camera stations were set in a mountainous area of 150 km² in the South Gobi Desert, near the Chinese border. At the end of the two-month study, the team had 120 images of snow leopards, including numerous shots of a female with three large cubs. Analysis of the photos revealed a total of four adults and three cubs. This number agrees with genetic fecal analysis done a year earlier.



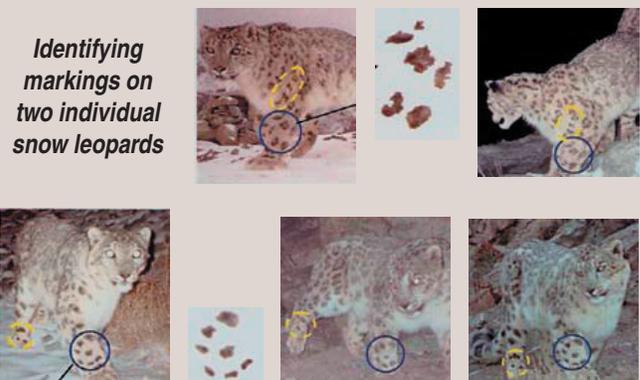
Mongolian Study Team

Mongolia is one of the most important range countries of the snow leopard with an estimated 800-1000 cats.

In interviews the team learned that 40% of local herders had lost livestock to snow leopards. The team observed only 106 ibex and unfortunately documented poaching of these ungulates. The low density of ibex suggests that snow leopards must increasingly depend on livestock. With the three young cubs approaching independence from their mother, our meetings with local officials to address the growing trade in wildlife for traditional medicine assumed greater urgency.

Dr. Munkhtsog, his staff and park rangers then conducted further camera trapping studies in a protected area along the border with Russia.

The photographs below demonstrate how camera trapping enables us to identify animals. Published in SHAN, the newsletter of SLC-IT.



Identifying markings on two individual snow leopards

Community-Based Conservation

Predator-proofing Corrals

Protecting communities' livestock is the cornerstone of the Conservancy's efforts to reduce revenge killings of snow leopards.



A predator-proofed corral in Matho, Ladakh, India

- In India, 21 individual and 22 community corrals have been predator-proofed benefiting 19 villages in Ladakh and Zaskar.
- In Upper Mustang, 14 corrals have been predator-proofed benefiting 245 households and protecting 30,000 small-bodied livestock.
- In Baltistan, 3 settlements are involved in corral predator-proofing.
- Khunjerab Village Organization in Gujal, Pakistan, predator-proofed 13 corrals benefiting 7 settlements.

Livestock Management

Communities depend on their livestock for meat, wool, milk, cheese, butter, fertilizer and fuel.

- With the assistance of the Department of Animal Husbandry, all livestock of Ulley, Ladakh, India, are being immunized.
- The livestock insurance program in Ulley is continuing.
- In Baltistan, Pakistan, the Conservancy supports a community-managed livestock insurance program with Project Snow Leopard. Co-financing comes from premiums paid by the 151 participating families and from contributions from local tourism. One participating village is Hushey, recipient of the 2005 Disney Conservation Hero award.



Immunization



Insurance

Valuing Snow Leopards



Brian Keating

2007 Winter Snow Leopard Quest sighting

This snow leopard has just fed on a wild blue sheep near Rumbak, Ladakh, India. A villager alerted Rodney Jackson and the ecotourists who were then able to observe the snow leopard for over an hour beside a major trail. *Wintertime Quest for the Snow Leopard in Ladakh* can be arranged through KarmaQuest Ecotourism & Adventure Travel whose efforts have generated \$5,000 for the Conservancy.

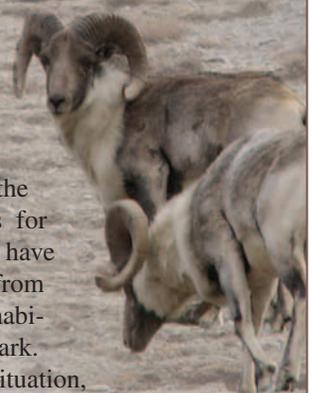
www.karmaquests.com

Community Action

Rumbak, Ladakh, India, expands their conservation efforts to include the Tibetan argali.

The Tibetan argali is the world's largest wild sheep and among the rarest species found in Ladakh. Argali are highly threatened, with only about 2,000 remaining in the wild today. The main reasons for their low and stagnant numbers have been competition for grazing from domestic livestock and limited habitat within the Hemis National Park.

Responding to this critical situation, the Rumbak community has decided to create a grazing reserve for the argali by banning the grazing of all domestic livestock in the preferred habitat of these magnificent wild sheep.



Rinchen Wangchuk

Community-Based Education

Expanding Community-based Conservation

Exchange visits build sustainable programs.



Rinchen Wangchuk with Spiti Valley visitors

- Four members of the Spiti-based NGO, Muse, visited Ladakh to learn from the Snow Leopard Conservancy-India Trust's community-based tourism programs. The team hopes to develop similar conservation related activities in Spiti Valley.
- Trained more than 10 organizations and over 40 individuals in Tajikistan to use participatory planning methods for community-based conservation and sustainable rural livelihoods.
- Collaborated with Project Snow Leopard to hire a full-time manager for the conservation program in Pakistan's Northern Areas centered in Baltistan.
- Signed a formal agreement for cooperation with Nepal Trust for Nature Conservation, the main NGO responsible for managing Nepal's conservation areas.

PhotoVoice Project in Tajikistan

Starting community-based conservation in a new area requires determining the aspirations of the people who live there.

Men, women and children were provided with cameras to take photographs of the most important things in their lives. They chose family, water, livestock, food and even yak droppings that are their main source of fuel and fertilizer. Through community discussion and planning, the Conservancy fosters locally inspired approaches to conservation benefitting wildlife and people.



The Next Generation of Conservationists

One of the Conservancy's highest priorities has always been the education and training of the next generation of conservationists.



Kalpavriksh



Kalpavriksh

Rabindra Shahi

For the team, one of the highlights of the training was the opportunity to participate in the Conservancy's conservation education program in rural schools. The students were enjoying the program and were participating in it with tremendous enthusiasm and commitment.

-Ishita Kanha, Muse

Collaborative achievements in 2007: SLC-India Trust and Kalpavriksh

- Expanded education program to 10 schools in Ladakh and Zaskar, India.
- Attracted more than twice the number of participants to conservation workshops as in 2006.
- Hired 2 part-time conservation educators and one trainee.

- Distributed 3 posters to 700 teachers at the request of the State Education Dept.

Dolpa-Mugu and Manang, Nepal

- Junior Ranger Program reached 33 schools and more than 600 participants.
- Students of Conservation Teacher Tilak Shrestha raised the remarkable sum of \$1270 for environmental activities.



Kalpavriksh

Measures of Success

Changing Attitudes and Prospects

Our aim is to ensure that local people are effective stewards of snow leopards, their prey and habitat. Thus, we seek to minimize the economic burden of livestock loss and the attitude among herders that the snow leopard is a pest. We monitor the annual number of livestock that succumb to disease or are killed by predators. There have been no cases of multiple losses of sheep and goats within corrals that have been predator-proofed. Examination of snow leopard droppings supports the observation that fewer livestock are being killed: in Rumbak, for example, the percent of livestock in the cat's diet has declined from 31% to around 11%. Local pastoralists are far more willing to co-exist with predators with only the occasional loss of a single sheep or goat.

But there are even more revealing measures of the Conservancy's effectiveness in transforming local people's perceptions of snow leopards. Women's groups leverage their income from Himalayan Homestays to upgrade the quality of their facilities to earn more in the future. The 40-odd homestay operators in prime snow leopard habitat earn from \$100 to \$650 (average \$230) during the short 4-month tourist season. In many cases, this is more than a two-fold increase in household income, in regions with few ways of earning cash. In addition, up to \$360 in sales from each of seven parachute cafes is shared among the 4-8 co-op member families. They are using additional income to send their children to better schools. They are appreciating the snow leopard as a valuable part of their natural heritage. With the 10-15% contribution to the Village Conservation Fund they are able to plant trees and grow fodder to reduce grazing in wildlife areas, clean-up the environment, and protect other rare wildlife such as argali. *See page 4.*

The Himalayan Homestays initiative is rapidly becoming self-sustaining, with over 100 families in 20 communities in Ladakh, Zaskar and Spiti benefiting. The program is being emulated throughout the region. Tourist visitation increased from 37 in 2001 to over 700 by 2006, and continues to grow. Client satisfaction exceeds 85% with tourists welcoming opportunities for cultural interaction. More information at www.himalayan-homestays.org

When local communities are able to co-exist with snow leopards while benefiting from their presence through ecotourism they can truly be the most effective wildlife stewards.



Wendy Brewer-Lama

Trekker being served a refreshing beverage in a parachute cafe

Recognition of our Work

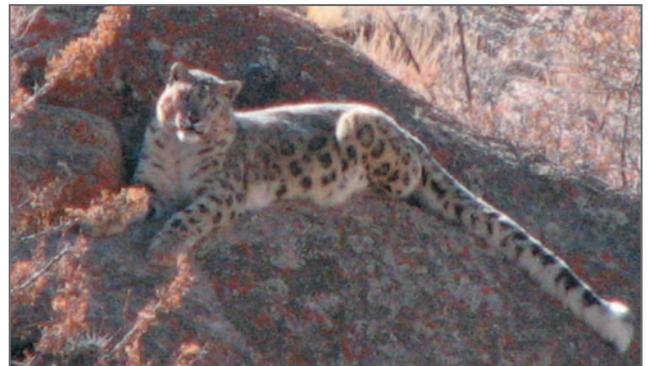
Indianapolis Prize Nominee

Dr. Rodney Jackson is one of six finalists for the 2008 Indianapolis Prize, to be awarded in September 2008. "All over the world, there are extremely talented and effective conservationists who are working without sufficient funding both for their work and their personal needs. Right now, animal extinction is preventable, but without their efforts, extinction will become inevitable," said Michael Crowther, Indianapolis Zoo President and Chief Executive Officer.

- Dr. B. Munkhtsog sought the assistance of the Conservancy to begin a satellite tracking study in Mongolia.
- Australian Himalayan Foundation approached the Snow Leopard Conservancy with a 7-year funding commitment.
- The Conservancy's work was featured in India's Sakal Herald Newspaper and in the PBS Special, *25 Years of Nature*.
- Dr. Rodney Jackson and the Snow Leopard Conservancy were featured in the winter 2007 issue of the Rolex Awards Journal. www.rolexawards.com/journal/journal21.html

Congratulations

Snow Leopard Conservancy-India Trust has produced the first issue of their newsletter SHAN. Download a PDF version of the newsletter at our website:
www.snowleopardconservancy.org/conservation2.htm



Jigmet Dardul

*Before, snow leopards were a despised predator
But now, thanks to the Conservancy...
Snow leopards and other wildlife are like a necklace around our mountains.
- a Ladakhi villager*

Donations of Time

Thanks to our incredible volunteers who gave over 500 hours to help us with proposal writing, events and other fund raising activities.

Donations of Equipment

Chris Wemmer for expertise in constructing camera traps
Steve Zachary & Lassen NP for equipment donation

Donations of Professional Services

Robert Freeman for computer maintenance
Tom & Mary Herrmann for graphics services
Terrell Hillard for the Conservancy website
Jagraj Singh Jamwal and Riju Raj Jamwal for technical assistance to SLC-India Trust
Magian Design Studio, Australia, for touch screen at Micke Grove Zoo
Dilpreet Singh for accounting SLC-India Trust

Donors

Up to \$499

Andrew & Anne Allen, Bank of America, Kerry Banks, Dr. Georges Barth, John Bartowick, Teresa Beardsley, Patty & Jim Beers, Jennifer Berger, Jeremy Bird, Richard & Anna Brown, Anya Burnett, Mary & James Campbell, David Carlos & Rose Nieda, Valerie Castellana & Bow Pfeifer, Michelle Chandler, Susan Combs, Charles & Linda Consolvo, Carole Coppock, Irene Crowe, Elizabeth Danel, Rebecca Dant, Shawn & Daniel Davis, Deanna Dawn, Carol Difeo, Wynne & Mark Dubovoy, Stephanie Dutkiewicz, Lisa Farfan, Emma Finn, Jennifer Foley, Michael Freedman & Cathy Ching, Jan & Codel Frydendahl, Christine Gee, Inge Gfroerer, Judy & Rick Glassey, Scott & Nadine Goetz, Gabrielle Goffinet, GoodSearch, Lori Grace, Robert Hall, Anne M. Hallum, Christine & Charles Hampton, Linda Harden, Harder + Company Community Research, Nancy Helmers & Leslie Ellison, Sidney Hertafeld, Cathryn & Carl Hiker, Carter Hunt, Joel Isaacson & Wendy King, Beverlee Johnson, Elizabeth Jonca, James Kalaher, Kappa Delta Zeta, Robert & Shirley Keller, Morris Knutsen, Renee Kunz, Renee Lagloire, Donna Lane, Gale Lederer, Karin Lee, Mary Lewis, Nancy & Ron Linton, Mark Logomasini, Darrell & Donna Louie, Edwina Lu, Stuff & PeeWee Marshall, Kate McCavitt, Tom McCormack, Julie Medefindt, Kitty Merz, Joyce Montfort, Timothy & Christine Moran, Alan Muller, David and Jane Hunter, National Parks Conservation Association, Stephanie Oney, Linda Elder Paul, Patricia Peterson, Robert D. Poorman, Candace L. Quinn, Shea Quirt, Jennifer Ramsey & Keith Woodland, Mike Roberts & Julia Selvig, Marilyn Rothman, SAP Matching Grants, Karen Sauer, Stephanie Schreiber, Christopher Schutze, Carol Schwartz, Donna Scott, Lisa Setterfield, SF Giants, Katherine & Edward Sickel, Bob Simmons, Anne Snowball, Victoria Stack, Andrea & Larry Steorts, Robert D. Stevenson, Temple University PreVet Society (Carissa Shipman), Tom Theriault, Sue Townsend, Chris Tromberg, John Tyler, Underhill ID School, Carlita Villanueva-Uroz, Charles Villarrubia, Vanessa Viso, David Vu & Judy Minh-Phong, Margo Walker, Patricia Watters, Rona Weintraub, Mark Whitney, Wild Cat Education & Conservation Fund, Janet Williams, Jim & Nikki Wood

\$500 - \$999

Daniel & Katie Beers, Hiroko Crispin, Doug & Pat Donaldson, Stuart During & Yoshiko Kurihara, Anne M. Elliott, Victoria Garner-Robert, Barbara George & Jerry White, Kenneth & Marilyn Lavezzo, Michael Linvill, Microsoft Matching Grants, Terry & Bill Pelster, Joyce L. Robinson, David & Linda Rosen, Stefanos Sidiropoulos & Lena Tsakmaki, the Stevens family, Ed & Sally Supplee, Chris & Tina Van Wolbeck, John & Cathy Yee

\$1,000 - \$4,999

Anonymous, Adelman Foundation, Penny Andrews, Mansoor Assadi, Latha Colby, Felidae Conservation Fund, Steven & Florence Goldby, Michael Hackett, Tom & Mary Herrmann, Bob & Kennon Hudson, IBM International Foundation matching grants, International Trust for Nature Conservation, Jane Goodall Environmental Middle School, Charles Knowles & Stephanie Kruse, John & Jullian Lawson, John & Kellie Lehr, Zara McDonald, Dave McGregor, Meyers Charitable Family Fund, Glenn Nash & Cheryl Kendall, Marjorie Parker, Cheryl Leigh Parkins, Ernesto Santos, Barry & Erin Sharaf, Linda Tabor-Beck, Charles & Judy Wheatley

\$5,000 - \$9,999

Alexander Abraham Foundation, American Himalayan Foundation, Calgary Zoological Society, Rob & Barbara Dicely, Victoria Hunter & Ian Hart, Omidyar Foundation, Michelangelo Volpi & Toni Cupal, Wildlife Conservation Network

\$10,000 - \$19,999

CGMK Foundation, Disney Wildlife Conservation Fund

\$20,000 or greater

Anonymous, Australian Himalayan Foundation, Christensen Fund, Shared Earth Foundation, Jon Vannini

Fundraisers held on behalf of the Conservancy

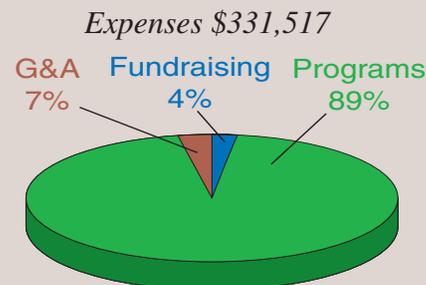
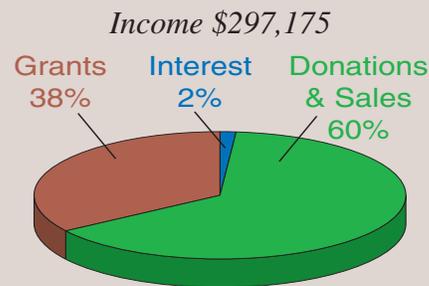
Australian Himalayan Foundation
Felidae Conservation Fund
Joint effort in Salisbury, England, hosted by: Sculptor Mark Coreth and the Summerleaze Gallery, with contributions by Discovery Initiatives, Victoria Blashford-Snell, Paul Brewer, International Trust for Nature Conservation, Rupert Merton, and the Sladmore Gallery
Wildlife Conservation Network

Fundraising special thanks

Charles Knowles and the Wildlife Conservation Network
Gudrun Batek
Cheryl Parkins & the Sierra Club

You can generate additional income for the Conservancy

Use GoodSearch as your search engine ~ www.goodsearch.com



Special Donations

Stephanie Dutkiewicz, *gift for Barry Sharaf*
Tom & Mary Herrmann, *in memory of Jean Crowley*
Cathryn & Carl Hiker, *in honor of "Tundra"*
Charles Knowles & Stephanie Kruse, *donation through WCN in honor of Toni Giuliani-Apaga*
Karen Sauer, *birthday gift to Angelicque James*
SF Giants, *in recognition of John Yee's 15th year anniversary*
Kenneth & Marilyn Smith, *in memory of "Shack," a Wildlife Waystation cougar*
Donors *in memory of Bill Andrews*
John Bartowick
Katherine & Edward Sickel
Janet Williams
Donors *in memory of David Pike*
Mary & James Campbell
Charles & Linda Consolvo
Irene Crowe
Anne M. Hallum
Robert & Shirley Keller
Nancy & Ron Linton
Terry & Bill Pelster
Raymond R. Simmons
National Parks Conservation Association

Critical Challenges in Saving Snow Leopards: How You Can Help

The Conservancy strives to empower communities to directly benefit from an ecosystem that includes snow leopards.

- \$50 rents pack horses to carry educational materials for two visits to Markha school in Ladakh, India.
- \$150 supports an exchange visit to study Himalayan Homestays.
- \$300 buys equipment for a village-based nature guide.
- \$600 buys a solar-electric fence for pastures in Nepal.
- \$800 funds a village-based camera-trap monitoring program.
- \$2,000 predator proofs a community corral in Zanskar, India.
- \$5,000 covers salary and materials for Education Program for one year.



Ram B. Gurung, Chhimi R. Gurung, Madhu Chettri

Promoting community-based stewardship of the endangered snow leopard, its prey and habitat



SNOW LEOPARD CONSERVANCY

**18030 Comstock Ave
Sonoma, CA 95476**