



Snow
Leopard
Trust

2004 Annual Report

Message from the Executive Director....

2004: The Year of Discovery



New discoveries add excitement to life, and this year was certainly an exciting one for conservation in Central Asia. After an absence of over 30 years, snow leopards were re-discovered on Mt. Everest. By the 1970s snow leopards had disappeared from Mt. Everest National Park. In the late 1980s there were reports that a few cats might be passing through the park from other areas of Nepal. Then last fall Som Ale, a researcher, photographed a snow leopard in Mt. Everest National Park. Som, financed in part by a grant from the Snow Leopard Trust, also conducted biological surveys that proved snow leopards have indeed made a comeback in the region. These cats are an encouraging sign that concerted conservation efforts can, and are, making a difference.

In December a new species of monkey was discovered in the mountains of India by a team led by Snow Leopard Trust Country Director, Charu Mishra. The monkey, a member of the macaque family, was spotted in the state of Arunachal Pradesh, which lies in the country's remote north-eastern region. This was the first macaque species to be discovered in the wild since the Indonesia Pagai macaque was found in 1903. The new "Arunachal macaque" is one of the highest-dwelling monkeys in the world. The discovery of a new species is thrilling and demonstrates the rich diversity of life in the central Asian mountains.

Perhaps most exciting, however, was the data that the Trust was able to gather from the Tomur Nature Reserve in northwestern China. The Reserve is an important conservation area located within Xinjiang Province and the Tien Shan Mountains. Created in 1980, the Tomur Nature Reserve contains an amazing variety of ecosystems, such as high peaks, glaciers, deserts, grasslands, river valleys, and forests. A diverse array of plants and animals can be found within the reserve, including endangered species such as the snow leopard, lynx, ferret, ibex, and argali sheep. This highly sensitive area of the Tien Shan mountain range was previously closed to research, and its wealth of information was locked within. However, in partnership with a local non-profit organization, the Xinjiang Conservation Fund (XCF), the Snow Leopard Trust conducted the first standardized snow leopard surveys in the reserve during the fall of 2004.

The Snow Leopard Trust is dedicated to the conservation of the snow leopard and its mountain ecosystem using a balanced approach that addresses the needs of the local people and the environment.

Snow Leopard Trust

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Field researchers collected baseline information on distribution and abundance of snow leopards. Important information about where snow leopards are living and the threats they are facing was also obtained, but there is a need for a more detailed study to fully understand the snow leopard's situation in and around the reserve. This year researchers will use trap cameras in conjunction with the SLIMS surveys to better determine the number of snow leopards in the area, the specific threats to their survival, and possible conservation programs.

This past year was truly a year of discovery for the Snow Leopard Trust. As we develop new programs to protect the snow leopard from extinction we will continually draw from these discoveries to improve our efforts. Thanks to this growing pool of information, I am confident that our programs will save more snow leopards in 2005 and beyond.

Thank you again for your support. Your support is truly making a difference.

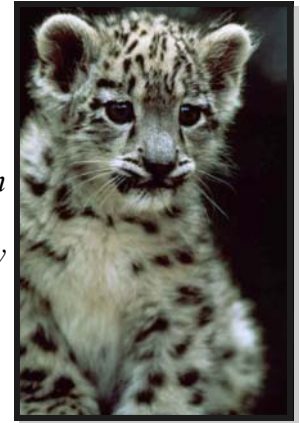
Warm wishes,

Brad Rutherford
Executive Director



Conservation Highlights

The Snow Leopard Trust's conservation plan for 2004 focused on strengthening the relationships with our community partners, as well as with our domestic supporters. As a result of these effective partnerships, significant progress was made in all four of the countries where we have been involved: Kyrgyzstan, Mongolia, India, and Pakistan. After years of waiting, the Trust was finally permitted to begin research and conservation programs in China, making snow leopard protection in this area a reality. Last spring, Trust scientists, together with researchers from the Xinjiang Conservation Fund, conducted snow leopard surveys along the country's mountainous western border. Community meetings are being held this year to determine the best way to protect these elusive cats. China could be home to as many as 2,500 snow leopards, and beginning conservation work there is a major milestone in the long-term protection of these beautiful cats.



We firmly believe that conservation starts with communities, and it is through a collaborative approach that we can assure a sustainable future for both the snow leopards and the people who share its mountain ecosystem. This annual report underscores this guiding principle, and outlines the Snow Leopard Trust's conservation work over the past year.

Kyrgyz Republic

The towering mountains of the Kyrgyz Republic were once home to an estimated 450 – 900 snow leopards. However, severe cuts in funding to their protected area system have led to increased poaching. In addition, a reduction of natural prey species due to competition for grazing territory with domestic livestock has also affected snow leopard populations. This people/wildlife conflict has brought snow leopard numbers down to dangerously low levels. Currently there are an estimated 150-300 snow leopards that reside in the mountain ecosystems of the Kyrgyz Republic.



In March of 2002, the Snow Leopard Trust partnered with the village of Ak-Shyirak to begin a small enterprise that generates income for the village through the production and sale of handicrafts. These handmade products are made from the wool of domestic livestock, which is converted into a felt material, and then made into high quality products such as baby booties, slippers, handbags, hats, and traditional rugs. As a part of this program, herders sign mutually drafted contracts agreeing to support conservation activities in the region, and to abstain from poaching the endangered snow leopard and its prey.





Snow Leopard Trust

Since its 2002 launch in Ak-Shyirak, the program has produced many substantial achievements. The amount of products ordered, as well as the number of individual participants, are steadily increasing. In 2002 there were nine local participants, and the first order placed in Ak-Shyirak provided \$700 to the community. In 2004 the number of local participants has grown to 30, and the order amount increased to almost \$2,700. In fact, the program was so successful that in 2004 it expanded to the village of Inilchek, where training workshops on felting techniques and product design were conducted at the request of the local participants. Villagers elected Shailoo Elikbaeva as their Snow Leopard Enterprises local coordinator, and the Conservation Contract for 2004-2005 was drafted and signed. The Trust placed its first order from Inilchek in June 2004 and another in October of 2004. Each household participating in the program received between \$50 and \$70 of additional income over a period of five months.



The research and monitoring component of the program continues. Trust researchers are undertaking field surveys in the territory of Sarychat-Ertash State Reserve and its adjacent areas in the Kyrgyz Republic. This year, according to research teams' observations, there are five snow leopards in the area, and that number remains stable. For the first time, researchers observed fresh snow leopard footprints, which indicate that the program is having a positive impact on the local snow leopard population.



Fresh snow leopard pugs



In 2004, the Snow Leopard Trust focused on reducing conflicts in Kyrgyz interior mountain villages and improving the quality of life for people living in the region.

A key goal for 2005 is to provide local communities with increased conservation education. The Trust believes that for the long-term survival of snow leopards it is important to involve the communities and provide practical

information about conservation and conservation practices. Several education projects took place this year in the Kyrgyz Republic. A pamphlet explaining Snow Leopard Enterprises was developed, published and distributed among country staff, local communities, National Environment NGOs and Community Business Forum office visitors. Three school based conservation education manuals for secondary schools (grades 5-8) were also developed with help from Peace Corps funds and volunteers. Notably, this was the first time that such educational materials have been published in the Kyrgyz language. Conservation education workshops called "ecocamps" were also organized for Inilchek and Ak-Shyirak where children and adults attended sessions on snow leopard conservation.





Snow Leopard Trust Mongolia

The Mongolia program goal for 2004 was to ensure that the scientific research necessary to maximize the impact of snow leopard conservation efforts was completed. Other important goals for the program were to increase the effectiveness of the conservation incentive program, raise local incomes and broaden job opportunities. In order to improve the effectiveness of the handicraft conservation initiative, local coordinators were trained in new product development at a design workshop in Kyrgyzstan. The Trust purchased a total of \$9,682 worth of products, making the average income per participant household \$43. The Trust also placed a second order in 2004, which delighted the herders and gave them encouragement to produce more. To facilitate raising conservation awareness, a newsletter for Irbis Mongolia was printed and distributed to participants. Stories and information about the conservation work of Irbis Mongolia and the Snow Leopard Trust have also been given to other publications by



MACNE and UNDP wild camel project. These newsletters spread the message of conservation by outlining conservation practices that are taking place, and serve as an essential outlet of information.

In 2004 Jennifer Snell Rullman, Conservation Program Coordinator for the Trust, went to Mongolia to meet with project participants to review and revise the conservation contracts. Educational goals were also discussed and measurable goals were set. The handicrafts program maintained its foremost activity of raising awareness among the local herders of 14 sites in six provinces. Conservation contracts were signed with about 220 herder participants. Park activity reports were reviewed and bonuses were given to the sites where there were no incidences of

poaching. According to the assessment results, there were only three cases of poaching snow leopard prey: red deer poaching in Tugen Uvs, gazelle poaching in Bayan Undor and Bayankhongor, and wild camel poaching in Erdene Gobi Altai. The bonus was withheld in these areas according to the contract conditions. The bonus for Bayan Ulgii herders was delivered at only 10% due to the ongoing investigation of the 15 snow leopard hides that were confiscated at the Russian border in April. The community met to discuss the event and has already implemented new strategies to strengthen their monitoring and enforcement efforts.





In order to optimize the impact of snow leopard conservation, a scientific methodology is vital to monitor the outcomes of these conservation practices. Four surveys were conducted for snow leopard and snow leopard prey species in Noyen, Tost, Altai Mountains of Mongolia, including surveys on established permanent transects. Peace Corps volunteers, National Park staff and local snow leopard representatives collaboratively conducted more than 50 snow leopard sign transect surveys in the field. The results added crucial data into the snow leopard database.



The Mongolian National Snow Leopard Conservation Policy is being developed. There had been many discussions with the Ministry of Nature, Environment of Mongolia, WWF Mongolian country office, and other partners to update the Snow Leopard Conservation Management Plan of Mongolia. In December of 2004 a workshop was held to address this issue. Partners decided to develop a National Snow Leopard Conservation Policy for Mongolia based on the Conservation Management Plan. Working groups were established headed by the State Secretary of the Ministry of Nature and the Environment, Mongolia. By June 2005 a National Snow Leopard Conservation Policy will be developed and submitted for the Mongolian government's approval and endorsement.

India

In general, the wildlife conservation movement in India has focused on entire species assemblage and ecosystem conservation. In keeping with this sentiment, the Snow Leopard Trust in India uses a holistic approach. Thanks to the excellent team leadership of Charu Mishra and Yash Veer Bhatnagar, the Trust is now recognized as one of the most respected and effective institutions working to study and conserve the snow leopard, its habitat, and other high altitude wildlife in a scientifically and socially responsible manner.



The main activities in the first half of 2004 broadly fall under two focus areas. The first is 'Research and Monitoring' work, which concentrates on developing a sound understanding of ecology and society that is a prerequisite for designing effective conservation programs, as well as for monitoring the impact of our conservation actions. In the other focus area, 'Conservation Actions', country staff in India try to work with a wide variety of people ranging from the village communities who share the snow leopard's habitat to the State and Central Governments, in order to ultimately protect the snow leopard from extinction.





In the beginning of 2004, a meeting was organized to establish the need and objectives for a Project Snow Leopard in India – a wildlife conservation policy for the high altitudes. This effort was a follow up to the Snow Leopard Survival Strategy Summit held in Seattle in 2002. The document prepared during the meeting has been strongly endorsed by

the local Governments of all states within the snow leopard's range. The Trust is attempting to develop this policy document in an entirely participatory manner, through consultations with the State and Central Governments, conservation and development NGOs, and representatives of the local communities. The first state-level workshop will take place in early 2005 in Himachal Pradesh.

In 2002, the Snow Leopard Trust worked with the village of Kibber to establish a livestock insurance plan to offset the costs of valuable livestock lost to predators. A village-managed Livestock Insurance Program gives herders an alternative to hunting the endangered cats. Families pay monthly premiums for each donkey, yak, or other large animal they wish to insure. The Snow Leopard Trust provided the financial support necessary to get the program up and running, and as part of the program, the Kibber community has agreed to stop hunting snow leopards and their key prey species, as well as helping in other conservation efforts. In order to receive compensation, the insurance program requires certain wildlife-friendly practices.

A locally elected committee administers this insurance program. The committee collects premiums, pays claims, and also gives an annual monetary reward to the herder who loses the fewest animals that year. The award encourages careful herding by making it a matter of pride—herders take turns watching the entire village's livestock herds and no one wants to be responsible for losing someone else's animal. Last year the entire community decided to split the award among the top three herders rather than declare a single winner because they felt strongly that all three were doing their best. The Livestock Insurance program is expanding to other villages because of its success in Kibber. Four additional villages (Kee, Gete, Chichim and Tashigang) have become a part of the program that is now benefiting around 100 families. The program has effectively removed most threats of retribution killings of the snow leopard. The village council of Kibber also agreed to expand a Village Reserve to three times its current size by adding in some prime snow leopard habitat. Encouragingly, a neighboring village has come forward this year with a desire to set up a Village Reserve.





Meanwhile, in the state of Arunachal Pradesh, our surveys in the high altitudes led to the discovery of the snow leopard and several other species previously not known to live there. The Trust is working with the state government to establish the first high altitude reserve in the region to protect the snow leopard. Staff also started consultations with local communities to assess the need and scope for community-based programs. In Ladakh, in the Gya-Miru region, the Trust is seeking the local community's cooperation in protecting the snow leopard. We responded to their expressed need for income opportunities by helping organize a workshop in handicrafts development for the village women.



Research and monitoring work included Snow Leopard Information Management System (SLIMS) transects and data collection on snow leopard prey, habitat, and livestock populations in Kibber. Results are used to evaluate the progress of our local conservation efforts. In Ladakh, staff collected data on the status of the snow leopard, on snow-leopard human conflict, ecology of the endangered Tibetan gazelle, and socio-economic changes in the region and their impact on snow leopard conservation. In various sites, we also promoted awareness of conservation issues in a variety of media, including technical reports publications in scientific books and journals, talks in workshops and conferences, and articles in popular magazines.

The highlight for the year was the significant progress made in our relationships with the state wildlife departments based on the successful acceptance of Project Snow Leopard. We also worked closely with the Forest Departments of Jammu and Kashmir (surveys), Himachal Pradesh (surveys), and Arunachal Pradesh (assistance with the new reserve). Utilizing the opportunities presented to us, we followed-up on the Project Snow Leopard Planning meeting in Mysore in March 2004 with state workshops in four of the five range states. This project will continue to be a high priority in the next year.



Pakistan

This past year was a positive one for snow leopard conservation in the Chitral region of Pakistan. The Snow Leopard Trust aimed to diversify income sources and reduce the number of snow leopards being killed in the area by initiating a program designed to train villagers to become entrepreneurs. The handicrafts income generation project took on a new level of success in the village of Kuju, and expanded to the nearby village of Parsan.

The handicrafts project creates an alternative source of income for herders in the Chitral area through the manufacture and sale of hand-crafted items that utilize traditional skills, such as embroidery. Most of the community depends upon their livestock for food, clothing, fuel, and income. Other sources of income are virtually non-existent, and families suffer economic losses when snow leopards attack their valuable domestic sheep, yaks, and goats. The handicrafts project has provided families with training and access to markets, and in return the community has signed a mutually drafted conservation agreement that prohibits the killing of any snow leopards or wild prey.



The project recently expanded to the village of Parsan, where depredation of livestock is causing conflict between herders and snow leopards as it did in Chitral. Skill centers were formed in Kuju and Parsan, providing equipment for women to produce products. Training workshops provided skills training in washing, pressing, tracing, designing, color scheming, and quality embroidery to the napkin producing group in order to create a more marketable product line. These new skills will lead to improvements in product quality which is important to increase the profitability and long-term sustainability of the program. Women participants in Kuju are preparing 1200 hand embroidered cotton napkins to be completed by spring of 2005.

Men and women entrepreneurs were selected in the villages of Kuju and Parsan to be trained in a skill development program. The communities decided that men in each family would support women participants in their business endeavors; the women are not able to market their wares by themselves due to limited resources and the purdah system, which restricts the activities of women in public.





In addition to the handicraft training and program implementation, an animal husbandry program has been initiated in the village of Kuju to encourage the protection of local wildlife including the snow leopard, to protect livestock from diseases, and to increase herder's income from livestock through increased productivity to compensate depredation losses.

The village of Kuju borders the Tushi game reserve, making it an important area for wildlife conservation. Similar to the handicrafts program, a conservation agreement was



A wild snow leopard glimpsed by Snow Leopard Trust biologist Ahmad Said in Pakistan.

developed by the community and Snow Leopard Trust. Under the agreement, the community will delay their livestock movement to pastures in the summer, not increase the number of livestock in the village, and will not kill snow leopards or their key prey species. The Trust is subsidizing vaccines for the livestock on a diminishing scale that ends after 4 years. Herders have also been trained in fodder preservation to minimize pressure on Kuju's pasture. In a test last winter, enough food was stored to feed the animals of two herders (88 animals) for fifteen days. This will

allow the herders to delay their animals' movement to the pastures by two weeks, which will provide more food for wild sheep and goats and less conflict with snow leopards. Herders have also been trained in marketing livestock so that excess livestock can be sold, earning additional income for the herders. All aspects of the pilot program have been successful and met with enthusiasm from the participating herders.

Survey results in from last year show that the amount of snow leopard sign (tracks, scrapes, etc.) in the Chitral region has increased from 2003. These findings indicate that the snow leopard population around the village may have already increased since these projects were established.

Throughout 2004, the Snow Leopard Trust also established a stronger working relationship with WWF-Pakistan. Brad Rutherford, Executive Director of the Snow Leopard Trust, along with Jennifer Snell Rullman, Conservation Program Coordinator for the Trust, and photographer Bill Hogue, traveled to Pakistan in order to clarify the Trust's connection with WWF-Pakistan. As a result, funding has been solidified from specific Pakistan donors, and Trust programs have improved in the Norwest Frontier Province.





Snow Leopard Trust China

Of the estimated 3,500 – 7,000 snow leopards that are said to inhabit the high mountainous regions of 12 Asian countries, approximately 2,000 – 2,500 of these cats reside in China. China’s Xinjiang Province likely harbors a third of that number and may be the most crucial snow leopard conservation area in all of snow leopard range territory. This distribution and relative abundance of snow leopards in Xinjiang has not been studied, so areas deserving conservation attention are not known. Threats to snow leopards in Xinjiang are also poorly understood but likely include loss of natural prey, retribution killing of snow leopards for livestock depredation, and poaching for hides and bones to sell on the black market.



In 2004, with financial support from the Leonard X. Bosack and Bette M. Kruger Charitable Foundation, the Snow Leopard Trust initiated a project in Xinjiang Province to begin to gather information to establish conservation programs for snow leopards in this crucial range. Dr. Tom McCarthy, the Trust’s Conservation Director, traveled to China in May of 2004 to establish



necessary working agreements with Xinjiang Conservation Fund (XCF), a young but effective NGO interested in snow leopard conservation. A Memorandum of Understanding was signed between the Trust and XCF detailing the work plans and budgets. Agreements were also reached with the Xinjiang Institute of Ecology and Geography, and the Chinese Academy of Science. Classroom and field training in Snow Leopard Information Management System (SLIMS) were conducted

for 25 people from the Chinese Academy of Sciences, Xinjiang universities, and essential government agencies. The training was enhanced by the publication of a guidebook on snow leopard ecology, conservation and research methods. Chinese translations of key portions of the handbook were given to all participants and an additional 100 copies were made available to various NGOs and agencies.

The Tomur Nature Reserve is an important conservation area located within Xinjiang Province and the Tien-Shan Mountains in northwestern China, near the border with Kazakhstan and the Kyrgyz Republic. Created in 1980, the Tomur Nature Reserve contains a variety of ecosystems, such as high peaks, glaciers, hot springs, deserts, grasslands, river valleys, and forests. A diverse array of plants and animals can be found within the reserve, including endangered species such as the snow leopard, brown bear, lynx, ferret, red deer, ibex, and argali sheep.





In 2004, significant scientific data was collected on snow leopard distribution and abundance in the Tomur Nature Reserve. The research team also conducted interviews with local residents to determine the nature of people/wildlife conflicts in the region. Professor Ma Ming of the Chinese Academy of Sciences headed the research team, which conducted transects and interviewed local people in the fall of

2004. Fifteen out of 42 transects revealed signs of snow leopards, and the scientists were able to collect fecal samples for future diet analysis. Three out of the 4 river valleys surveyed had fresh snow leopard prints or scat. In limited cases, the scientists were able to approximate age, sex, and family size from snow leopard footprints. Estimates based on this initial data show that the density of snow leopards in the Tomur area is 3 to 5 cats per 100 square kilometers, and that the total snow leopard population is about 150 to 180 individuals.

From interviews with 93 local people, the scientists found that about 20% had seen snow leopards in the past, and 82% had seen ibex or argali sheep, which are an important prey species. However, while walking the transect lines, the researchers seldom saw ibex herds, and never saw any argali. Twenty-three percent of those interviewed had witnessed incidences of snow leopard predation of domestic livestock. Livestock populations have been steadily increasing over the past 50 years. Due to these increasing numbers, livestock may be out-competing those wild ungulates for grazing territory, causing hungry snow leopards to attack domestic animals.

The research team noted the occurrence of mining operations which may be very destructive, as miners use explosives to extract marble from the earth. Deforestation, illegal hunting, over-grazing of livestock, a disease epidemic in livestock, road building, and an influx of tourists were also observed. All of these factors pose problems for local wildlife and need to be addressed as soon as possible.

In 2005, state-of-the-art methods, such as trap camera and genetic analysis of fecal samples, will be used in conjunction with transects, in order to gather more detailed information on snow leopard populations. The Trust will begin work with government agencies and local communities to determine the most appropriate type of conservation programs for the area and to initiate first steps toward a conservation program that will protect snow leopards and provide benefits to local communities.



Photo by Margaret White

Not since George Schaller visited this part of China in the early 1980's have there been any surveys done on the species in this region of China, much less any serious conservation efforts. Many doors have opened in China during recent years, and foresight helped the Trust to be there when the time was right. We are now positioned to make significant advances in the conservation of snow leopards in the Xinjiang Province in 2005.



Small Grants Program

The Trust continues to support other important research, education, and conservation projects through the Small Grants Program. These projects are crucial in uniting researchers in snow leopard range countries and creating a cohesive approach to conservation. Snow leopard range covers over 650,000 square miles of habitat in the mountains of central Asia. The cats are found in twelve different countries which encompass a vast array of cultures, religions, bureaucracies, and languages. These factors make it imperative to embrace many different research initiatives, in order to optimize available information.

In 2004, with funding from Carol and Bruce Hosford, the Trust supported three grant proposals: two from Nepal and one from India. These projects involved a wide variety of initiatives from snow leopard population studies, to improving sign-survey techniques. The Trust anticipates continuing the Small Grants Program in 2005, and is extremely pleased with the outcomes of the 2004 studies.

Nepal - Assessing the Status of the Snow Leopard Population in Langtang National Park



This project is part of an ongoing snow leopard study established in 2003 with support from the Snow Leopard Trust. The study involves a multifaceted approach designed to provide important baseline data on the status of the snow leopard population in Langtang National Park (LNP), Nepal and to generate long-term support and commitment to the conservation of snow leopards in the park.

The specific aims include: 1) conducting a population survey of the snow leopards in LNP, focusing on distribution and abundance; 2) assessing the status of prey species populations in the park; and 3) providing educational outreach programs on snow leopard conservation for local school children (K-8) living in the park. During the 2004 study period, snow leopard signs were observed (including pugmarks and scats) although somewhat fewer than in 2003. In fact, initial results show a 20-30% decline in observed snow leopard signs from the 2003 to 2004 study periods. Similarly, the average herd size of the snow leopards' primary prey species in LNP (the Himalayan tahr, a large goat-like animal) was a bit lower than in 2003. Based on information from local herders and the researchers' experience, it is suspected that the tahr populations and snow leopards may be moving to more remote areas of the park. Currently (2005 study period), the researchers are planning to expand their study area and establish addition survey blocks in the more remote areas of the park where larger herds of tahr have been reported.





Four educational outreach programs were conducted in elementary and middle schools in two villages in LNP during 2004. Also, during the 2004 study period, two graduate student field assistants from the Central Department of Zoology at Tribhuvan University in Kathmandu (Janak R. Khatiwada and Jagan Nath Adhikari) completed their Masters degrees (M.S.) based on their participation in the snow leopard study. They were able to use data collected during the snow leopard study from 2003-2004 to form the basis of their respective theses.

We consider this a significant achievement and an excellent example of how this project is helping to establish a growing body of well-trained, regional experts who are capable of implementing the programs needed to ensure the future of Nepal's biodiversity and the conservation of snow leopards.

At least three different stories were published in Nepali newspapers/magazines summarizing our efforts and promoting the snow leopard as a flagship species that is in critical need of stronger conservation initiatives. In addition, Dr. Chalise is a frequent guest on local/national radio/TV shows in Nepal where he is invited to provide expert opinion on wildlife management and conservation issues. Our snow leopard research is a frequent topic of discussion.

Nepal - Have snow leopards made a comeback to the Everest region of Nepal?

In the 1960s, the endangered snow leopard was locally extirpated from the Sagarmatha (Mt. Everest) region of Nepal. In this Sherpa-inhabited region of the high Himalayas, the flourishing of tourism since the ascent of Mt Everest in 1953 has caused both prosperity and adverse impacts to the region. The concern is what catalyzed the establishment of Mt. Everest National Park in the region in 1976. In the late 1980s, there were reports that some transient snow leopards may have visited the area from adjoining Tibet, but no biological surveys exist to confirm the status of the cats and their prey. Have snow leopards finally returned to the top of the world? Exploring this question was the main purpose of this research project.

Researchers systematically walked 24 sign transects covering over 13 km in three valleys (Namche, Phortse and Gokyo) of the park, and counted snow leopard sign. The results indicated that snow leopards have made a comeback in the park in response to decades of protective measures, the virtual cessation of hunting and the recovery of the



Snow Leopard Research Team 2003-2004
(L-R: K. Chaudhary, R.C. Kyes, J.N. Adhikari, M. Ghimire, J.R. Khatiwada, M.K.Chalise [not shown]).



Photo by: Som Ale





Himalayan tahr which is a key snow leopard prey species. The average sign density (4.2 signs/km and 2.5 sign sites/km) was comparable to that reported from other parts of the cats' range in the Himalayas.

On this basis, we estimated the cat density in the Everest region to be between 1 to 3 cats per 100 sq km, a figure that was supported by different sets of pugmarks and actual sightings of snow leopards in the 60 sq km sample survey area. In the study area, tahr population had a low reproductive rate (e.g. kids-to-females ratio, 0.1, in Namche). Since predators can influence the size and the structure of prey species populations through mortality and through non-lethal effects or predation risk, snow leopards could have been the cause of the population dynamics of tahr in Sagarmatha, but this study could not confirm this speculation for which further probing may be required.

The presence of snow leopards in all three valleys, as determined in this study, varies from what has been reported previously by Ahlborn and Jackson (1987) who recorded sign possibly made by (transient) cats from Tibet only in Gokyo (including Thagnak) valley in 1987. Apparently, snow leopards have expanded their range in Sagarmatha because of three decades of protection afforded by the Department of National Parks and Wildlife Conservation since 1976. Researchers located signs in 58% of transects conducted, with 2.5 sites/km and 4.2 all signs/km (2.5 scrape/km), in contrast to the previous survey (13% of the 31 transects had signs, with 0.7 sites/km, and 2.6 all signs/km, and 0.5 scrapes/km). In Sagarmatha, snow leopards have actually increased in abundance, and it is now believed that they actually reside here.

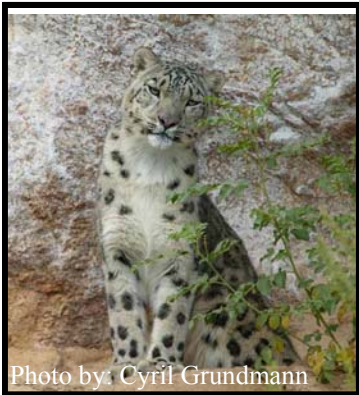


Photo by: Cyril Grundmann

India - Improvement in sign-survey technique and use of tracks for population monitoring of snow leopards.

The recently published report '*Snow Leopard Survival Strategy*' emphasizes the need to develop new methodologies for population estimation and monitoring of population trends. Though sign surveys have been used for the last 10 years to confirm the presence of snow leopards in a given area and then to arrive at its abundance and population trend, they are suspected to have potential biases. The report also calls for the development of a reliable, simple, and preferably inexpensive

method for monitoring population changes over time and area. It is suggested that sign survey techniques can be improved and should be used with other available methods of population estimation to evaluate their reliability. The population trend estimation or actual density estimation will help researchers to assess the impact of conservation practices on conservation of snow leopard.

The full report for this important project will be released in several months and a summary will be included in next year's report.





Natural Partnership Program

Support of snow leopard conservation efforts in 2004 provided by zoos from across North America and Europe was outstanding. Twenty-five zoos participated in the Snow Leopard Trust's Natural Partnership Program (NPP), a program that creates long-term conservation partnerships with zoos, working together to fulfill our common mission of protecting wildlife.

In 2004 zoos from the United States, Canada, France, and the United Kingdom provided more than \$32,000 towards snow leopard conservation, education, and research projects in India, the Kyrgyz Republic, Mongolia, Pakistan and for the first time, China. Twenty-one of the twenty-two zoos who participated in NPP in 2003 (96%) continued to support the Trust in 2004, providing stability and longevity to the snow leopard conservation projects in the field. We would like to thank all of the 2004 Natural Partnership Program participants for their dedication and commitment to snow leopard conservation.

Albuquerque Biological Park (NM)
Binder Park Zoo (MI)
Blank Park Zoo (IA)
Buffalo Zoo (NY)
Colchester Zoo (UK)
Columbus Zoo (OH)
Disney Wildlife Conservation Fund
Great Plains Zoo (SD)
Jungle Cat World (Canada)
Les Félines d'Auneau (France)
Marwell Zoological Park (UK)
Mill Mountain Zoo (VA)
Milwaukee County Zoo (WI)

Oregon Zoo (OR)
Parc Zoologique de Doué la
Fontaine (France)
Pittsburgh Zoo (PA)
Sacramento Zoo (CA)
San Antonio Zoo (TX)
Santa Barbara Zoo (CA)
Sunset Zoo (KS)
Tautphaus Park Zoo (ND)
Toledo Zoo (OH)
Tulsa Zoo (OK)
Utah's Hogle Zoo (UT)
Woodland Park Zoo (WA)

A Special Thanks...

The Snow Leopard Trust would like offer a special thanks to the Woodland Park Zoo and Disney Wildlife Conservation Fund for their integral support for snow leopard conservation efforts. The Woodland Park Zoo has collaborated with The Snow Leopard Trust since the founding of the organization in 1981, and continues this partnership today by proving substantial funding, collaboration on projects, and sharing of resources and expertise. The Disney Wildlife Conservation Fund provided the Trust with a significant grant during the 2004 giving cycle for a large scale project in India.

The Trust would also like to give special recognition to the Tulsa Zoo for its contribution as a *Zoo Partner* in 2004 and to Parc Zoologique de Doué la Fontaine, Toledo Zoo, Columbus Zoo, and the Milwaukee County Zoo for their contribution as *Zoo Supporters* in 2004. This level of support is noteworthy, making a great impact for our conservation efforts.





Snow Leopard Trust Supporters

The Trust receives financial support from a number of sources including foundation-sponsored grants and individual donors. None of our conservation efforts would be possible if it wasn't for supporters like you. The Trust would like to thank those who have contributed \$250 or more, without whom our conservation hopes would be unattainable.

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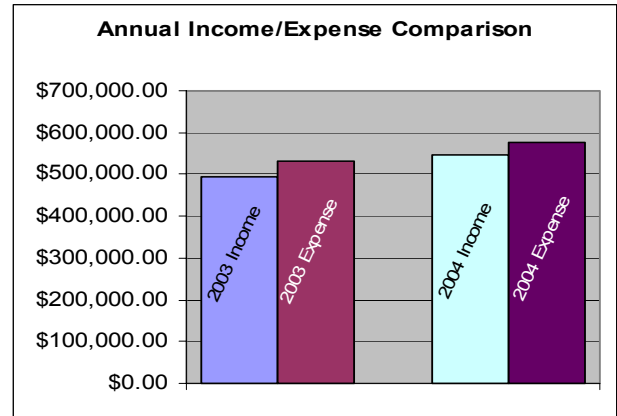
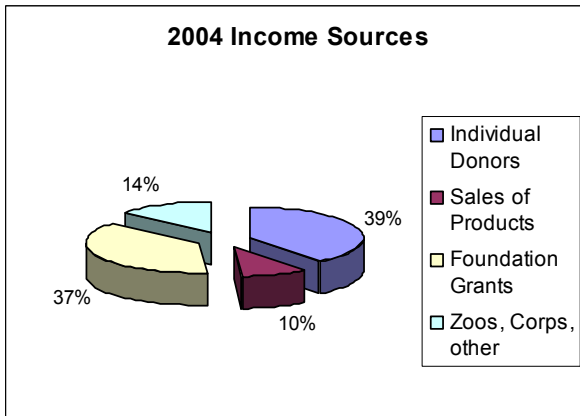
Finances

The Snow Leopard Trust continues to grow thanks to our generous supporters and great field programs. Income has grown to \$539,000; up from \$280,000 in 2000 or 92%. Funds continue to come from generous individuals, zoos, foundations, and companies.

This year was also a positive one for sales of Snow Leopard Enterprises' merchandise. Sales continued to grow seeing a 30% increase from 2003 to 2004. We expect to maintain this trend as we concentrate on further developing our marketing strategies.

The Trust will continue to focus on increasing its membership base. The more people who are informed about the Trust's mission of protecting the snow leopard from extinction, the better chance we have of securing funding for their long-term survival.

The Snow Leopard Trust will continue to grow in the coming years, becoming more capable of meeting its mission of protecting the endangered snow leopard. As always we are working to ensure that as many resources as possible go to the field. The following is a breakout of our expenses and revenue.



	2004	Dollars	Percent
Program Expenses		\$484,961	84%
Administrative Costs		\$89,723	16%
Total		\$574,684	100%





Board of Directors

The Trust feels fortunate to have such a dedicated Board of Directors. The Trust could not ask for a more involved group of individuals and look forward to seeing the Board grow and diversify even more in the future.

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Snow Leopard Trust
www.snowleopard.org

