

Report *On the **Fifth** SLIMS Training Workshop (Nepal)*

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Nepal's snow leopards (*Uncia uncia*) are mostly found along the northern border with Tibet (China). The large populations are in Dolpa, Mugu, Manang and Myagdi Districts. Potential habitat totals about 30,000 km². Numbers are estimated at 300 - 500 but surveys are urgently needed to confirm this rough guess. Like elsewhere, the primary threats center on poaching, depletion of natural prey, livestock depredation and resultant retributive killing of snow leopards by herders, and the lack of public awareness and support for conserving snow leopards, especially among local herders.

Within Nepal, eight protected areas totalling 19,000 km² encompass snow leopard range. From a landscape perspective, these could be seen as constituting three groups, namely Shey-Phoksundo National Park and Dhorpatan Hunting Reserve; Annapurna Conservation Area, Manaslu Conservation Area, and Langtang National Park; and finally Sagarmatha National Park, Makalu-Barun National Park, and the Khangchenjunga Conservation Area.

The Fifth Snow Leopard Information Management System (SLIMS) Workshop and Field Survey Techniques Training Session was held in

Shey-Phoksundo National Park (SPNP) in May-July, 1999, as a collaborative effort of ISLT, WWF-Nepal Programme:

(WWF) and HMG's Department of National Parks and Wildlife Conservation (DNPWC). The schedule consisted of two related parts, a nine-day "hands-on" field training session for 18 rangers and game scouts, followed by nearly four weeks of status surveys and a wrap-up session in Kathmandu. Specific objectives

are to

Train park management and field staff in use of standardized field

techniques to survey endangered snow leopard, their prey and habitat;

Establish the status of rare wildlife species through surveying selected parts of SPNP and the adjacent region of Dolpa;

Introduce participants to techniques for assessing habitat and people-wildlife conflict issues;

Acquaint DNPWC and WWF staff with the SLIMS computer software for storing, managing and disseminating information related to the management and conservation of snow leopards, their prey and habitat.

Participants walked three full days from the nearest airfield to the training site near the legendary Phoksundo Tal (Lake). At Palam, the park's summer headquarters, they were introduced to the ecology of snow leopards, the aging of blue sheep, and the use of GPS (Global Positioning System) devices. At Phoksundo Lake, the team learned field survey and mapping techniques beginning with villagebased interviews (using questionnaires), followed by focused site visits to search for animals or their sign. Following the interviews, participants noted the importance of establishing good relationships with local park residents, the need to ensure that reliable information is gathered, and the value of training park staff in procedures that engage

villagers in management decisions (including PRA or Participatory Rural Appraisal methods). The importance of increasing public awareness of SPNP and its unique attributes was highlighted.

Emphasis then turned to sign surveys and ungulate counts, data analysis and report writing. During one practice session, a team led by the park warden was lucky enough to flush a snow leopard from its

daytime resting site under a rocky overhang and then get a brief glimpse of this beautiful animal as it ran uphill! At the end of the initial sessions, ten participants reselected for further training and

participation in the subsequent survey through SPNP and Upper Dolpa. From a review of the topographic maps for the region, local knowledge, and the habitat requirements of key candidate species, we identified areas where surveys could most profitably be centered. This was modified periodically, as we moved through the area and took every opportunity to interview local residents (especially herders, traders and lamas) to determine where they have seen the wildlife we were interested in. Whenever we sighted blue sheep, participants practiced sexing and aging them, as well as improving their skills for accurately measuring slope steepness and aspect using sighting and non-sighting compasses. All snow leopard scrapes were measured and aged, and their location obtained using a GPS receiver. Transects were conducted using the standardized SLIMS procedures.

A total of 28 snow leopard sign transects were completed. Most sign was found in quite broken terrain, especially along the base of cliffs, and in areas less disturbed by livestock, and it was clear that snow leopards are widespread within SPNP and the surrounding area. We sighted 74 groups of blue sheep on different days, with a mean group-size of 12 individuals and comprising at least 783 individuals (eliminating groups sighted more than once) between the elevations of 3,950 m and 5,050 m. Herds were most commonly sighted on smooth or moderately broken, open slopes (mean slope angle 31°), at a mean distance from cliff escape terrain of 270 m. Vegetation in which they were found reflected the dominance of Caragana scrubland and open grasslands in the region.

If the resulting rough estimates of 2-4 blue sheep per km² proves to be an accurate assessment of densities within SPNP, then the approximately 3,000 km² of blue sheep habitat within the park should support 6,000 - 12,000 blue sheep. As this is substantially less than projected on the basis of estimated snow leopard abundance and food requirements, it indicates that snow leopards are subsisting on prey other than blue sheep (e.g., marmots, livestock). We caution that the above figures are preliminary, but use them to illustrate how such information can be derived from good survey

data, and to emphasize their importance in making informed management decisions for the park.

A summary of household interviews conducted by survey participants indicated that a majority of persons interviewed had seen snow leopards at least once, and considered them to be relatively common. Livestock depredation by both snow leopard and wolf was apparently widespread, and many herders felt that the park should compensate them for their losses or remove habitual depredators. There was much more disagreement, however, on whether the numbers of snow leopard and blue sheep were increasing or decreasing in the park and its immediate surroundings.

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Even these preliminary household interviews indicate that traditional animal husbandry patterns and sources of livelihood are changing in SPNP. For example, many herders are reducing the size of their yak herds and increasing the number of yak-cattle crossbreeds in response to the growing tourism traffic, especially in lower Dolpa. With cash from rental of pack animals and some portage for tourists, the local people regularly visit Tibet to purchase household goods.

Results of the Training Workshop and Survey were reported at a one-day session, Status of Snow Leopard in Nepal, held in Kathmandu and attended by over 40 persons from government, conservation NGOs, prominent conservationists and the press.

Conclusions and Recommendations: The lack of trained and equipped staff within DNPWC and local NGOs, mountainous terrain, insufficient commitment to baseline monitoring, and limited funding all explain why little is known about current snow leopard distribution and numbers in Nepal. It is unfortunate that we do not know with certainty which protected areas support snow leopards, where the poaching hotspots are, or key factors involved in depredation of livestock. This workshop provided a step toward remedying this situation. Because no

protected area can be effectively managed where there is a vacuum of baseline information, the first priority of DNPWC and responsible NGOs must be to undertake focused status and distribution surveys, in which the primary threats, conservation issues and needs are also identified on a park-by-park or sector-by-sector basis. We urge DNPWC to significantly strengthen its training programs for its field-based staff, particularly rangers and game scouts. The team provided specific guidelines for establishing and monitoring permanent transects and census areas for snow leopard and blue sheep.

Other important workshop outputs included a status report of snow leopard and prey species for parts of Shey-Phoksundo National Park; development of Nepali-language questionnaires for use by field staff,

and a booklet, Snow Leopard In Nepal, containing facts about snow leopards and their habitat published by the workshop partners.

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**Excerpted from the full report, which is available from ISLT on request.*