

Conservation of the snow leopard in Nepal

Full Text:

In the early 1970s, Peter Mathiassen's famous book "The Snow Leopard" (Viking 1978), in which George Schaller looks for the snow leopard *Uncia uncia* in remote parts of Dolpo (west Nepal) while Mathiassen seeks spiritual tranquility, established Nepal as a haven for the elusive snow leopard *Uncia uncia*. Later the first five snow leopards were radio-collared in the Langu valley (Dolpo) by Rodney Jackson's team in the 1980s. The early 1990s witnessed Nepalese biologist Madan K. Oli in Manang valley in the Annapurna Conservation Area (ACAP), tracking three snow leopards. These accounts show that snow leopards of Nepal have caught comparatively more academic interest than in neighboring countries, such as China or India. Although Schedule 10 of Nepal's National Park and Wildlife Conservation (NPWC) Act lists the snow leopard as a protected species, practical work on its conservation is yet to break through, partly because these remote alpine valleys lack adequate facilities and resources for dedicated park managers and interested biologists to enforce laws or carry out conservation work. Founded in 1986 by the King Mahendra Trust for Nature Conservation, ACAP was designed to protect natural resources of 7,681 km² of land surrounding the Annapurna massif, inhabited by 120,000 people. The choice of creating a conservation project as opposed to a national park was deliberate. It was a calculated message to the people that this conservation initiative would be different from previous ones. ACAP has geared efforts towards snow leopard conservation. Since 1993, eight local snow leopard conservation committees have been in charge of conserving snow leopards, as well as addressing the needs of livestock and herders.

In the past, the government used park funds for other purposes, and little money trickled down to the local level. Now, in the Annapurna region, local residents not only share in the profits their lands are earning, but also take part in protecting those lands. The government mandated the Trust to levy an "entrance fee", (at present Rs 1,000 per visitor), thereby making the area and the inhabitants self-supporting. ACAP strives to make local conservation bodies self-functioning. The local Snow Leopard Conservation Committee is one of such committees designed to be self-sustaining. At present, this committee owns more than 500,000 rupees (about US\$12,000) as an endowment fund set aside for the welfare of the snow leopard and livestock. The fund is growing annually. Committees are responsible for such activities as hiring communal herders, development of alternative pastures to livestock predation prone areas, and deterring poachers and hunters.

By establishing local conservation committees, a culture of conservation was created where people have a similar mindset, and expectation that everyone has to work together for future generations. The project, mobilizing several hundred active members of its 55 committees and sub-committees, integrates the needs of the people with those of wildlife. Hence, it is not only the snow leopard, but also the array of other wildlife species and the people themselves that receive equal attention. Even several years since the project's inception, these community outreach efforts are still important. In order to mobilize the people into the main stream of conservation, i. e. wildlife conservation, many schools and health posts have been constructed and hundreds of adult literacy classes run through over 250 formal mothers' committees, as an integrated "conservation for development" package program.

ACAP strives to harness indigenous knowledge and religious practices that enhance conservation. In these northerly societies many indigenous beliefs and shamanistic practices, reflecting local pre-Buddhist traditions, were incorporated and subsequently reworked into the Buddhist pantheon and ritual system. One such ritual connected to the snow leopard and its predation forbids alpine herders to roast meat, for otherwise the mountain god will send its "dog", i.e. snow leopard, and one has to suffer livestock losses. There are stories of great lamas frequently making trips to Tibet in the form of snow leopards, in search of rare medicinal herbs. Other folklore describes the snow leopard as a "fence" for the crops, meaning that in the absence of snow leopards livestock would be free-ranging and thus would invade crop fields. Folk wisdom thus metaphorically suggests that the presence of the snow leopard is an indicator for a good quality of livelihood. Hence the earlier reports that villagers wanted a total extermination of the snow leopard, as a solution to livestock depredation (Oli et. al 1996), is not wholly true in the Annapurna Conservation Area.

Local inhabitants still believe that snow leopards (and domestic cats) are considered to have been born particularly to remove the sins of their past lives, and killing these animals means having their sins transferred to their own lives.

Unlike in most of the Tibetan nomad societies (Schaller 1998), in these northern societies of the Annapurna massif, the economy has improved because of tourism and the people's long-term association in trade within or outside Nepal. As the economy has gradually improved, religious conservation values have become rooted deeply into social norms, thus motivating practitioners to abandon such activities as hunting. Besides, ACAP's hundreds of home visits, mobile conservation-camps and street theatres have now annexed snow leopards, with the region's booming tourism (60,000 trekkers per annum), and people are rather proud that they possess the snow leopard.

Some religious leaders have long been active in preaching anti poaching slogans long before tourism flourished. One such lama is Karma Sonam Rimpochhe (Phu valley), who took a great conservation initiation 35 years ago. In his domain, the social penalty system for those harming any form of wildlife, including snow leopard, is very rigid. ACAP honored this lama with an award on the auspicious occasion of 1995 Earth day celebration.

Assuming that snow leopards regulate populations of blue sheep *Pseudois nayaur*, then major fluctuations in blue sheep populations would affect the local populations of snow leopards. Over the past several decades livestock numbers have fluctuated in these valleys due to changes in the economy and social structures. What actual effects of these changes have

had, or in the long run will continue to have, on the dynamics of blue sheep and snow leopard populations and their habitats are important research gaps. Thus, since 1999, ACAP, with the help of Earthwatch project (USA) has started monitoring livestock, blue sheep and snow leopard populations in one of such valleys, upper Manang. These data will be correlated with rangeland parameters (e.g., vegetation composition). ACAP plans to establish a long-term database.

Recent (1999) Manang data indicated a mean density of 5.9 blue sheep per km², and fresh signs (pug-marks) of two snow leopards (one adult and a sub-adult) which indicates the presence of more than two snow leopards in the total study area of 61.2 km². Some 5-7 snow leopards per 100 km² have been reported to occur in this valley (Oli 1994).

It is not only the blue sheep, but the region's five species of livestock (horse, sheep, goat, yak and cattle) that re important for the long-term survival of the region's snow leopards. They constitute an important diet of the big cat, particularly in winter, not because the abundant Himalayan marmots *Marmota himalayana* that have been reported to constitute their major diet in summer in Manang, are unavailable in winter (see Oli, Taylor and Rogers 1993), but perhaps because the biomass of livestock (easy prey for snow leopard if unguarded) is three times that of blue sheep (Jackson *et. al.* 1994). In fact, there are neither marmots nor their burrows in the entire 561 km² upper Manang valley. The claim that the Himalayan marmot constitutes a major summer diet of Manang's snow leopards is baseless.

ACAP addresses both research/monitoring as well as practical aspects of snow leopard conservation work, and tries to be the model for the entire Himalaya region in conserving the snow leopard. Affiliation of Earthwatch Institute, USA will help achieve this goal.

References

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