

## Report on the Snow leopard Research Project of W.I.I.

Background: Over a nine-month period between November, 1985 and July, 1986 a survey was conducted of the snow leopard and its associated species in the Himalayas of northwest India by a joint team of the Wildlife Institute of India and the International Snow Leopard Trust. A representative biogeographic cross-section of snow leopard habitat was surveyed in Central and Southern Ladakh of Jammu & Kashmir, Kulu-Manali region of Himachal Pradesh, and the upper Tons Valley of Uttar Pradesh. Evidence of snow leopard presence was found in each of the regions surveyed. Substantial data on movements, habitat use and interaction of snow leopards with humans and domestic livestock was gathered in the areas surveyed. Information was also collected on the vegetation and on the other wildlife of the survey areas. Some of the animal species studied were : Blue sheep (Pseudois nayaur), Ibex (Capra ibex), Shapu (Ovis orientalis), Nayan (Ovis ammon), Himalayan Tahr (Hemitragus jemlaticus), Wolf (Canis lupus), Marmots (Marmota spp), Pika (Ockotona roylei), etc. The results of the survey were found useful in formulating recommendations for conservation site location and management in the areas covered. Besides, as a result of the information gathered during the survey, several areas of research requiring further investigation became apparent. One such research priority relates to Central Ladakh where an intensive study of the ecology of snow leopard was recommended.

Current Research: The Wildlife Institute of India has an ongoing research project entitled : "The Ecological Studies of the Snow Leopard and its Associated Prey Species in the Hemis High Altitude National Park, Ladakh (J&K)". The principal investigators of the project are Shri H.S. Panwar and Dr.G.S. Rawat, and the research fellow is R.S. Chundawat. The project, which has a 3-year duration, was commenced in December, 1987.

The snow leopard is an indicator species for high altitude ecosystems. Increasing human and livestock pressures continue to add adversity to the snow leopard and its prey in such habitats. Therefore, in order to plan for conservation action, there is need of scientific information on the snow leopard, its habitat and prey species. The current research project in the Hemis National Park seeks to fill this information gap.

The main objectives of the study (in brief) are:

- 1) to gather information on snow leopard home range size, movement patterns, habitat use, feeding habits and population structure;
- 2) to assess the level of competition between snow leopard and its co-predators viz., the wold and lynx;
3. to assess the availability of prey and their density in the study area, with detailed biological, ecological and behavioural studies of the major prey species viz. Blue Sheep (Pseudois nayaur);

4. to carry out habitat mapping and evaluation for snow leopard and its prey in the study area; and
5. to study the effects of humans and their livestock on wild animals.

The study is being conducted in a 120 square kilometer area of the Hemis National Park which is a characteristic high altitude cold desert --a typical habitat of the snow leopard in the transhimalaya. The study area lies south of Leh (the Capital of Ladakh region) some 30 km away. It forms the watershed for Rombok nallah, a tributary of the Indus river. Altitude in the study area ranges from about 3300m to 6000m. There is evidence of 6-8 snow leopards being active in the study area, which also has a good population of major prey species and co-predators.

Since December, 1987 considerable information has been gathered by the researcher on the terrain, vegetation, major prey species and the snow leopards themselves in the study area. Detailed study of the flora is currently being undertaken which will also help in classifying different habitat types, their mapping and evaluation.

The study will then enter its main phase of identifying individual snow leopards and following their movements and activities. For this purpose about 6 snow leopards will be live-trapped and radio-collared in the coming months.

The results of the study will be utilized in conservation, setting up protected areas, and their management. They will also provide the base line for future studies in high altitude ecosystems. The findings of the study will also be useful in developing a management plan for the newly established Hemis High Altitude National Park of which the study area forms a part.

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