

## STATE COUNCIL FOR SCIENCE, TECHNOLOGY & ENVIRONMENT HIMACHAL PRADESH

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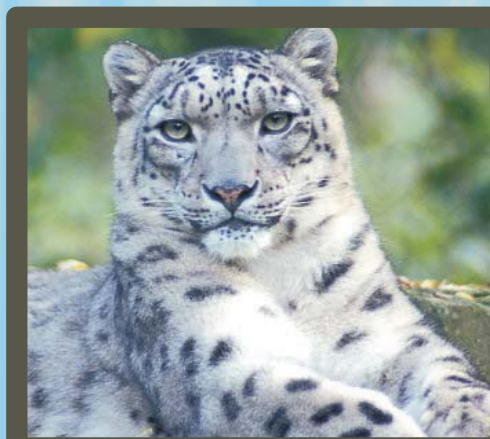
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## *From Editor's Desk*

*I often wonder, how much material wealth shall be enough to satiate human hunger? The more I go deep into it, the more I get convinced that the human greed has no limits. This may be due to unbridled population growth, fast paced life and changing structure of our social setup where we tend to go the wrong way for selfish interest. This tendency has become so rampant that we hardly dare to adopt uprightness or practice fairness. Attitudinally, we look for small gains at the expense of our integrity. As a consequent we are losing our moral fiber and the social bonds. It is a matter of fact that the social integrity and character is essential for a healthy environment. Recognizing the importance of public 'attitude' in environmental conservation, we have already dedicated two issues exclusively to the 'attitude', elaborating its influence in environmental conservation.*

<http://www.hpenvis.nic.in>



Under The Aegis Of MoEF

*Traditionally 'Environment' is poise, pure, serene, soothing and perennial subject, and in India, the same is honoured as 'deity' - a source of existence and thus worshipped. Ostensibly, the people who virtually believe in fair conduct and are ready to take pains for others good should have the right to task environmental conservation. Let the environment be a no non-sense matter in the eyes of people who actually value it as life line for all living organism.*

*Again, coming to contentious issue of environmental degradation and all other phenomenal off-shoots like global warming, climate change, glacial retreat etc., - the population growth is the main contributing factor. The high demand for food, water and shelter has rendered our natural resources vulnerable to man's apathy. The overtures leading to accelerating the pace of development irrespective of environmental consequents may cost dear for human living. The equilibrium between demand and supply of the natural resources, therefore, is the need of the hour. This can primarily be done by curtailing the population growth to manageable extent- lest the multiple of human greed devastate the natural wealth of our mother earth.*

## In editorial

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## Himachal Pradesh: New State Bird, State Flower, State Animal

The Snow Leopard has replaced the Musk Deer as the State Animal of Himachal Pradesh while the endangered Western Tragopan has been named the new State Bird, a status earlier held by the Monal pheasant. The State Plant has also been changed, from the colourful *Rhododendron arboreum* to the endangered *Rhododendron Campanulatum* (Pink Rhododendron)



**Western Tragopan** (*Tragopan melanocephalus*)  
(locally known as Jujurana)

Status: Critically endangered

Size: male 68-72 cm; female 60 cm. Weight: male 1.80-2.20 kg; female 1.20-1.40 kg.

Identification: Typical Tragopan, with orange to red collar, red facial skin and white-spotted, black belly. Similar species: Confusion could arise with Satyr



Tragopan (*T. satyra*) in south-east of range, although recent surveys suggest that the two species are not in fact sympatric<sup>1</sup>. Male differs from that species primarily by red facial skin and mostly black base-colour of lower breast to vent, female has a noticeably duller and greyer base-colour to upperparts and, in particular, underparts.

Call: a loud 'way waah', during breeding season. Wailing cry 'waa waa waa', when agitated, repeated a number of times

Food: Mostly vegetarian. Feeds on fresh leaves, bamboo shoots, acorns, berries, seeds and insects.



### **Pink Rhododendron (Gulaabi Buraas)**

Genus: *Rhododendron*

Species: *Campanulatum ssp. aeruginosum*

Parts used: the wood

*Rhododendron campanulatum ssp. aeruginosum* is a wild species *Rhododendron* found in the Himalayan alpine regions of Northern India, Bhutan, and Nepal. It grows on the stony alpine slopes and ledges at altitudes of 12,000 to 14,500 feet.



### **Snow Leopard: *Panthera uncial* (Barfaani Tenduaa)**

Status: Endangered

Description: Soft grey fur with dark black-brown spots, yard-long furry tail, large paws covered with fur to protect it against the snow and cold. The winter coat is lighter in colour.

Size: The head and body length is 47-59 inches, while the tail is 31-39 inches long.

Weight: 75 kg

Age: Snow Leopards have lived up to 15 yr in captivity.

Location: Snow Leopards prefer mountain regions in the winter and meadows and rocky areas in the summer. They are found in the Himalayan, Altai and Hindu Kush areas.

Diet: The diet of the Snow Leopard varies by region and season, but consists mostly of Wild Sheep and Goats, and smaller animals such as Pikas and Marmots.

Birds of India - Western Tragopan  
[www.blueplanetbiomes.org](http://www.blueplanetbiomes.org)

## Himachal Pradesh - Livelihood

Most of the people in the state are farmers or farm labourers and live in the villages. These people are a close knit community and are ever willing to co-operate with their fellow villagers and share their problems. Most people earn their living



through farming. The hill tribes also rear goats, sheep, horses and mules. Some tribes earn their living by grazing cattle, crushing stones or searching for and collecting medicinal herbs.

The villages follow a neat and orderly pattern. Each village has people, belonging to different castes and income groups. The carpenters, the barbers, the ironsmiths and the Kahars help the landowners with petty farm jobs or other necessary work. They are paid in kind and not in cash. These tribes also help each other in following the rituals and customs at the time of a death or a birth. The larger farms lie outside the villages and are owned by a few rich landlords. People belonging to the lower castes also do begar (work with no payment) for the landlord. The new land reforms and legislations have changed the

situation to a certain extent.

The villages follow a Panchayat system. The Panchayat is responsible for development work within the village. The people worship the land and it is supposed to be sinful to steal or sell it. The land is the farmer's sole, property, although at times he is forced to pawn it. The fallow land within or outside the village is known as shamlat. It is considered as communal property.

The settlement follows the caste pattern. The settlements of the higher caste Brahmins, the Rajputs, the Mahajans (money lenders) are beautifully kept and well looked after. The Rajput live close to the hills and forests. The moneylenders and the Khatri live to the cities. The Brahmins live both in the rural and the urban areas. The houses of the lower caste are usually on the outskirts of the villages. The smiths have their foundries inside the house where they work morning and evening.

The villages attach a great importance to brotherhood. When arranging wedding-matches, the caste and Gotra is given importance. People prefer to marry into families with similar backgrounds both religious and economic and into



neighbouring villages so that kinship may grow. Each caste is keen to retain its traditions and values. The lower castes are now aware of the benefits of working and living as a community. The joint family system is encouraged and the familiar relationships are cherished and filial devotion is given high priority. The sister is highly respected and other relationships are also given due importance.

The houses are built of clay bricks and the roofs are of slate. In the hill areas stones are used instead of bricks and timber is used for the roofs. The cattle houses are close to the house. People prefer pucca houses. The tribals live in double storeyed houses where the ground floor is used for the cattle and the first floor is used as their living quarters. The labourers live in thatched huts. The architectural patterns change from area to area. Among the gods both Aryan and non-Aryan Gods are worshipped. Shiva is the chief God among the Gaddis. Vishnu, Krishna and Buddha are also worshipped. There is very little impact of Jainism. The Buddhist Lama religion has had a great impact in the Lahaul, Spiti, Pangi and Kinnaur areas.



## Hilly women

A hill women's life is extremely busy from early morning to late evening and sometimes even till late at night. They work side by side with men in agriculture and their role is as important in the field as at home. Women are constantly at work, breaking earth, transplanting, weeding, reaping, pounding or carrying head loads of fodder, firewood, manure, water, grain, flour and in the building season when men build terrace walls and terrace the fields, they break earth-clods and excavate stones and carry them.

After house hold chores of looking after the children and cooking, women are usually away from their homes most of the day collecting grass, leaves or firewood or tending animals in the forests. On moonlit nights at harvest time they often work in the fields after meals past midnight. Besides carrying the produce to her home, she has to spread it for drying on the roof or the yard to protect it from early decomposition. In horticulture, besides the pruning and plucking she is also mainly responsible for grading and packing of apples. The



rearing of animals, milking of cows and buffaloes, preparing butter milk and butter and later ghee are all performed by women. Collection of the dung of cattle, dumping it and later carrying it to the field to be used as manure is the woman's job.

Winter and rainy season are a period of inactivity in the fields. But even then, women spin, weave or knit and makes mats and baskets. Some even help their mates in chopping wood. This inequitable division of labour among men and women is surprising. Probably when agriculture was first started in the hills, man engaged himself in the more intensive tasks like that of cleaning the fields and constructing terrace walls. His wife must have assisted him sowing and harvesting the crop. Later this division of labour became more or less fixed, even when the work of cleaning and terracing did not engage him to that extent. Hill women are not inhibited in her work or behaviour. She maintains her cheerfulness as also her freedom. Though tradition ridden, she has many liberal ideas of family relationships.

The married women in the area are fond of dressing up and bedecking themselves with ornaments of all kinds. The married women braid their hair and wear numerous pieces of jewellery denoting their married status. They must wear a ring (koka) in their noses and their clothes are colourful and often trimmed with Gota (silver or gold edging). They cover their faces in front of the elders and may not speak directly to older relatives like the father-in-law, the uncle-in-law or the husband's older brothers. They must not sit on a seat higher than the one occupied by the elders of the family. Serving the in-laws, massaging and rubbing them with oil are all parts of her daily routine. If a women forgoes any of her duties, she is heavily criticized.

The widows life is totally colourless. She must live like a nun and she cannot wear colourful clothes or jewellery or participate in the singing and dancing on feast days and festivals.

The woman in Himachal are bound strictly by traditions. They must not utter the first name of an older relative but imply it symbolically or by pointing at an article with a similar name. On feast days and festivals all of them barring widows dress up in all their finery with colourful skirts and scarves and waistcoats and rows of jewellery all over their bodies.

Kinkri Devi was born in a poor family in Ghaton village in Sirmaur district in Himachal Pradesh. Disturbed by the large-scale unscientific mining of limestone in Sirmaur hills, she protested against the mining lobby, mobilising local residents.

In 1987, she began a 19-day hunger strike against mining and shot to fame. She also moved a petition in the high court against large-scale damage unscientific mining was causing to the environment in Sirmaur hills, 160 km from here.



The Hon'ble High Court ordered shutting down 42 limestone mines in Sirmaur, an order, which is still in force. In 1995, she was honoured with an invitation to inaugurate the International Women's Conference in Beijing.

Three years later, she was conferred the National Maharani Laksmibai Mahila Shakti Award by Prime Minister Atal Bihari Vajpayee. She died in the age of 82.

Source: [www.nerve.in](http://www.nerve.in)



## Hydel Power Projects in Himachal Pradesh

Himachal Pradesh has a vast hydel potential and through preliminary hydrological, topographical and geological investigation, total power potential so far identified is approximately 21000 MW, which is nearly 14% of the total hydro power potential of the entire country.

The development of hydropower projects brings both positive and negative impacts, on one hand these power projects help in development of infrastructure as well as generating employment opportunities to the local communities, whereas on the other hand it may degrade the natural environment as well and local people may be required to be displaced from the areas.

The development of large and medium size hydro-electric schemes like Bhakra (1200 MW), Pong Dam (360 MW), Beas Satluj Link (Dehar Power House) 990 MW, have already caused deforestation, submergence of the area, rehabilitation of the population and adverse impacts on flora and fauna in the state. It mainly disturbs the catchment area, watercourse itself, nature conservation, wildlife, water supply, quality of water, agriculture, forestry, water transport, cause floods, silting, erosion and cloud bursting.

Each hydel scheme in the state has its own specific environmental issues. Before taking up the project works, visual documentation of water sources, hill slopes and other environmental sensitive features, is mandatory to enable actual assessment to quantify overall environmental

impact. Boring of the tunnels under hills and other underground works resulting in land slides, cracks in the houses, drying of natural springs and other water sources falling along the alignment of head race tunnel, have already been

reported on a number of hydel schemes. Such environmental hardship is a matter of concern to the local people residing in the vicinity. The Department of Environment & Scientific Technologies recently established has initiated various measures and have also involved various expert institution to quantify the actual environmental impacts on the concerned river including environmental impacts on flora and fauna in the downstream areas in case of diversion of river for power generation.



## हिमाचल का गौरव- राज्यीय वन्य प्रतीक

हिमालय के पश्चिमी भाग में बसा हिमाचल प्रदेश भारत का एक बहुत ही खूबसूरत प्रदेश है। मनमोहक वादियां, हरे-भरे जंगल, झीलें, बर्फ से लदी शृंखलाएं, स्वतन्त्र रूप से घूमते वन्य जीव-जन्तु एवं पक्षी इस प्रदेश को एक अनूठा क्षेत्र बनाते हैं। प्रदेश में वनस्पति की लगभग 3295 एवं वन्य प्राणियों की 5721 प्रजातियां पाई जाती हैं।

वर्ष 2007 में बर्फानी तेंदुआ, गुलाबी बुरांश एवं जुजुराणा को हिमाचल प्रदेश के नये वन्य प्रतीक का दर्जा दिया गया है। इससे पहले कस्तुरी हिरण, लाल बुरास तथा मोनाल पक्षी को राज्यीय वन्य प्रतीक का दर्जा प्राप्त था।

बर्फानी तेंदुआ (Snow Leopard/*Panthera uncial*) बर्फीले एवं पहाड़ी क्षेत्र में पाया जाने वाला बहुत ही शर्मीला प्राणी है। इसके शरीर पर बहुत ही मुलायम स्लेटी रंग के बालों के बीच गहरे भूरे रंग के छोटे-छोटे धब्बे होते हैं जो बर्फीली सर्द हवा एवं ठंड से इसकी रक्षा करते हैं। इसके शरीर की लम्बाई लगभग 47-59 इंच तथा इसकी पूंछ की लम्बाई लगभग 31-39 इंच होती है। व्यस्क होने पर इसका वजन 75 किलो के लगभग होता है। जंगली भेड़ बकरियां एवं छोटे जीव जन्तु इसका भोजन हैं। इंटरनेशनल यूनियन फॉर कन्जर्वेशन ऑफ नेचर द्वारा इसे विलुप्तप्रायः प्रजाति की सूची में रखा गया है।

गुलाबी बुरांश (Pink Rhododendron) उत्तरी भारत, भूटान तथा नेपाल में पाया जाने वाला पौधा है। यह 12000 से 14500 फुट की ऊंचाई एवं पर्वतीय तिरछी ढलानों पर पाई जाने वाली प्रजाति है। हिमाचल प्रदेश में गुलाबी बुरांश की प्रजाति के पेड़

ऊंचाई वाले क्षेत्रों में पाए जाते हैं। लाल बुरांश की अपेक्षा गुलाबी बुरांश बहुत ही कम क्षेत्रों एवं मात्रा में पाया जाने वाला पौधा है।

जुजुराणा (Western Tragopan/*Tragopan melanocephalus*) को इसका नाम जिला कुल्लू हिमाचल से मिला है जिसका अर्थ है-पक्षियों का राजा। किन्नौर में इसे प्यारा, रामपुर बुशैहर में ज्याजी तथा चम्बा तथा कांगड़ा में फुल्गार नाम से जाना जाता है। कुछ क्षेत्रों में इसे सींग वाला पंछी के नाम से भी पुकारा जाता है।

यह पक्षी देखने में अत्यन्त ही सुन्दर होता है इसकी गर्दन सुनहरी एवं चमकीले हरे रंग की तथा गर्दन के पीछे का भाग चमकीले लाल रंग होता है। इसके शरीर पर भूरे एवं काले रंग के धब्बे होते हैं। इसका आकार 71 सेंटीमीटर के लगभग होता है। यह प्रायः देवदार के जंगलों, घने बांस के बीच पाया जाता है।

इंटरनेशनल यूनियन फॉर कन्जर्वेशन ऑफ नेचर द्वारा इसे विलुप्तप्रायः प्रजाति की सूची में रखा गया है। इस पक्षी को वाइल्ड लाईफ प्रोटेक्शन ऐक्ट 1972 के शड्यूल-1 में सम्मिलित किया गया है।

प्राकृतिक आवासों के साथ छेड़-छाड़ एवं अन्य मानवीय गतिविधियों के कारण ही ये प्रजातियां विलुप्त होने की कगार पर खड़ी हैं। किसी भी प्रदेश के लिए वहां के राज्यीय वन्य प्रतीक गौरव का विषय होते हैं। प्रत्येक नागरिक का यह कर्तव्य बनता है कि इन विलुप्तप्रायः प्रजातियों के संरक्षण, इनके प्राकृतिक आवासों की सुरक्षा तथा प्राकृतिक सन्तुलन बनाए रखने में अपना पूर्ण सहयोग दें।

To