

No sighting, footprint or scat of any larger mammalian predator was recorded. The snow leopard, Panthera uncia, occurred in the park till the 1960's and wolves, Canis lupus, are said still to visit the park territories (Fleming, undated), but I cannot confirm the presence of either species.

The expedition was funded by the Italian National Research Council and the Gruppo Efim, under the aegis of the Ev.-K2-CNR. B. Musi and R. Menardi helped at all stages of the survey.

#### References

- Fleming R.L., Jr. (undated) The natural history of the Everest area. A summary. Background Paper for Heart of Himalayas Conserv. Progr., pp. 1-30. Mimeo.
- Schaller G.B. 1973. Observations on Himalayan tahr, Hemitragus jemlahicus. J. Bombay Nat. Hist. Soc. 70: 1-24.

#### STATUS OF THE GORAL (Nemorhaedus goral) IN HIMACHAL PRADESH, INDIA

by Paolo Cavallini

Department of Cell Biology (Zoology Section)

Via F. Camerini 2

62032 Camerino (MC), Italy

Mailing address: Via Mazzini 64, 56025 Pontedera (PI), Italy

To determine distribution and status of Nemorhaedus goral in the state of Himachal Pradesh, India, a field survey was conducted during October-November 1989. Of the 29 Wildlife Sanctuaries and 2 National Parks of Himachal Pradesh, the following were visited and goral abundance was evaluated through indexes based on sightings and droppings:

-Gangul-Siya-Behi: very high grazing and poaching pressure; goral either absent or very scarce

-Kalatop-Kajiar: low disturbance; wildlife (including goral) abundant

-Nargu: very high grazing pressure and scarce suitable habitat; no goral signs recorded

-Great Himalayan National Park: disturbance generally low; goral common, also outside the Park

-Bandli: low disturbance; goral very common

-Shikari Devi: high disturbance; goral either absent or very scarce

-Majathal Harsang: low disturbance; goral extremely common on two very steep, grassy slopes (totaling about 25 Km<sup>2</sup>)

-Shimla Water Catchment Area: almost completely undisturbed; goral fairly common

-Chail: very high anthropic impact; goral present

-Renuka and Simbalbara: covered by thick tropical scrub; goral common in both areas, but limited to steep slopes.

No active goral was seen between 8:00 and 16:30, while the highest numbers were observed just after the sunrise. This pattern suggests a crepuscular (and possibly also nocturnal) activity. Moreover, most of the goral seen (61.4%) were moving and 11.4% were standing still, while only 4.5% were grazing or browsing. This tend to support the idea of a nocturnal feeding activity, preceded and followed by crepuscular movements from and to the resting grounds.

The mode group size of the observed goral is 1, but groups of 2 and 4 were also common; only one large group (9 goral) was observed. No goral was seen on slopes less than 60° (N=61). The lowest altitude at which gorals were observed during this survey was around 500 m a.s.l. (much lower than previously reported) with the highest densities under 2000 m, in areas little surveyed by other researchers. On the other hand, my results agreed with data in the literature in pointing out a preference of goral for very steep areas, possibly as an anti-predator strategy. In fact, in all the areas where goral was common (Kalatop, Great Himalayan National Park, Bandli, Majathal, Chail, Renuka, Simbalbara), I also found signs of leopard (Panthera pardus). My data therefore suggest that the main habitat requirement of goral is the presence of steep slopes, together with low snow depth and low human disturbance.

From the present survey, it appears that the goral in Himachal Pradesh is fairly common and widely distributed. Furthermore, its presence also outside the sanctuaries appeared likely and was often reliably reported. The three sanctuaries in which no goral sign was recorded (Gangul, Nargu and Shikari Devi) are characterized by high grazing and probably poaching pressure, higher than

average altitude and thus probably snow depth. More detailed research is clearly needed to assess the relative importance of these factors. Goral habitat, however, is fragmented, especially at the lower limits of the distribution. This might threaten in the long run the survival of some isolated population.

A full paper has been submitted to a scientific journal for publication.

#### THE GORAL OF BINSAR WILDLIFE SANCTUARY, NORTHERN INDIA

by Maurizio Locati

Department of Cell Biology (Zoology Section)

Via F. Camerini 2

62032 Camerino (MC), Italy

In March 1987, I had the opportunity to visit Binsar Wildlife Sanctuary, Almora District, Uttar Pradesh, Northern India, to investigate the local population of goral (Nemorhaedus goral goral). The Sanctuary is approximately 70 sq Km in size and is between 1000 and 2500 m asl. The area is characterized by steep slopes, covered mainly by Rhododendron arboreum and Quercus leucoxytrichophora, with rock outcrops and very small grass meadows. It is one of the few, virtually untouched areas of the Himalayan foothills, with a marvellous view of the Nanda Devi massif.

Besides goral, the sanctuary contains leopard, jungle and fishing cats, yellow-throated marten, sloth bear, langur, rhesus macaque, muntjak (Muntiacus muntjac) and wild boar (Sus scrofa). There are also about 200 species of birds including kalij and chir pheasants, satir tragopan, and many species of raptors and vultures. Goral were previously common throughout the region, in fact the main estate, in what is now the sanctuary, is called Goralkot - the fort of the goral! Hunting and habitat loss through grass cutting and timber harvesting are probably responsible for the goral's decline outside the protected area. These two factors were probably responsible also for the local extinction of serow (Capricornis sumatraensis), Himalayan tahr (Hemitragus jemlahicus) and red panda.

The number of goral thought to inhabit the sanctuary is around 250 indivi-



# caprinae

SPECIALIST GROUP OF THE SPECIES SURVIVAL  
COMMISSION OF I.U.C.N.

# NEWS



**CHAIRMAN:** Prof. Dr. Sandro Lovari, Zoology & Comparative Anatomy, Department of Cell Biology, University of Camerino,  
Via F. Camerini, 2. 62032 CAMERINO (MC), Italy

**Editors:** S. Lovari, D.M. Shackleton

N° 5 (1) - June 1990

## Editors' Preface

The more I get involved in the conservation of wild caprins, the more surprised I am with the enormous gaps I discover in the information on the status of many Caprinae taxa, not to speak of data on their biology. David Shackleton and I are now despairing of getting enough information on the Snow sheep (Ovis nivicola) for the Action Plan. What to say about Argali (Ovis ammon) subspecies, which conservation biologists claim all should be protected whereas hunting lobbies maintain that some populations can be trophy-hunted? What about even an European animal such as the Pyrenean ibex (Capra pyrenaica pyrenaica) which has reached a status very close to extinction, unnoticed by the majority of conservationists? What about the Red goral (Nemorhaedus baileyi) status and numbers? Can takin (Budoreas taxicolor taxicolor) stand some hunting pressure,