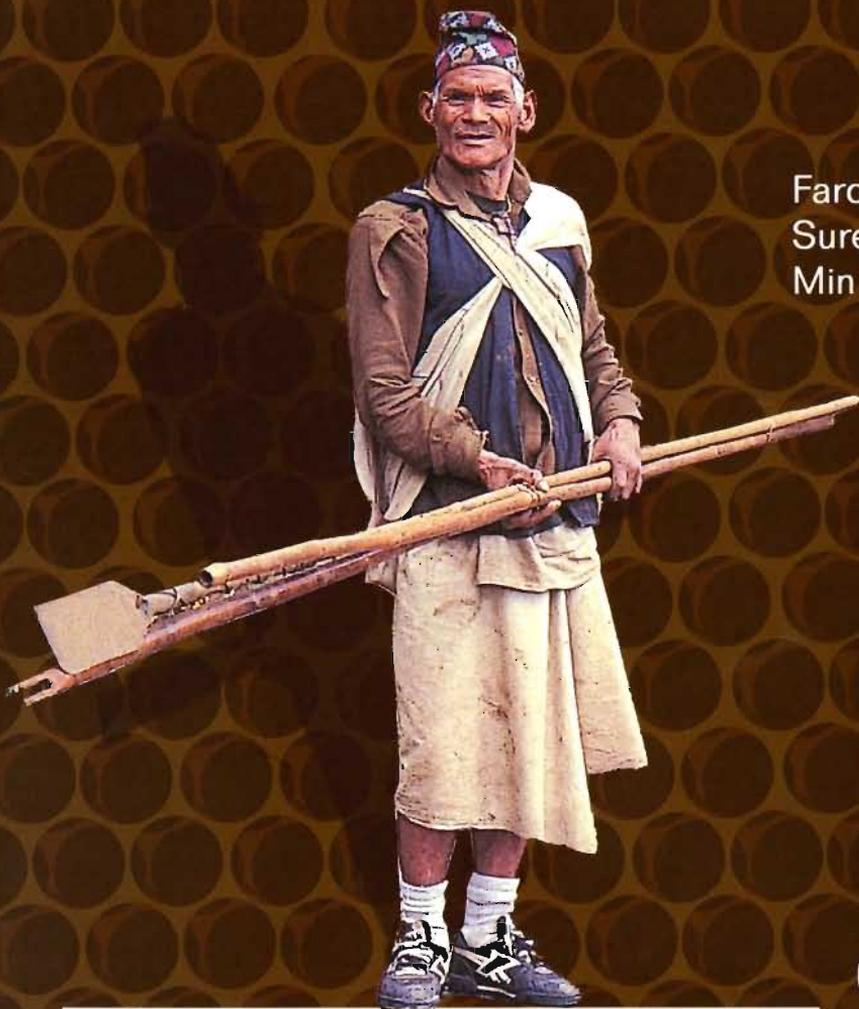


THE HIMALAYAN CLIFF BEE *APIS LABORIOSA* and the Honey Hunters of Kaski

Indigenous Honeybees of the Himalayas (Vol 1)

Farooq Ahmad
Surendra Raj Joshi
Min Bahadur Gurung



about ICIMOD

The International Centre for Integrated Mountain Development (ICIMOD) is an international organisation devoted to development of the Hindu Kush-Himalayan region covering all or parts of eight sovereign states, Afghanistan , Bangladesh , Bhutan , China , India , Myanmar , Nepal , and Pakistan . The Centre is located in Kathmandu, Nepal. The primary objective of the Centre is to promote the development of an economically and environmentally sound mountain ecosystem and to improve the living standards of mountain populations. The Mountain Farming Systems' Division at ICIMOD was established to promote improvement of farm productivity on small mountain farms without degrading the resource base.



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January 2003

International Centre for Integrated Mountain Development
(ICIMOD), PO Box 3226, Kathmandu, Nepal

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ISBN: 92 9115 684 1

Published by
International Centre for Integrated Mountain Development
GPO Box 3226, Kathmandu, Nepal

Editorial Team
A. Beatrice Murray (Editor)
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Printed and bound in Nepal by
Quality Printers Pvt. Ltd.

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Foreword

One of the major challenges in the mountains of the Hindu Kush-Himalayas (HKH) is to turn the vicious cycle of poverty, environmental degradation, and lack of access into a virtuous cycle of hope, sustainable development, and equitable access. ICIMOD is addressing this problem on many fronts in projects concerned with integrated approaches to environmental conservation and sustainable development. The indigenous honeybee project is concerned with the special aspect of honeybees and the roles they play in the challenging environment of the HKH in maintaining floral biodiversity and crop productivity, and in income generation – particularly for subsistence farmers in poorly accessible areas. The bee project uses an approach that combines the tools of community empowerment with the conservation and genetic improvement of indigenous bee species and streamlining the marketing of bee products. The aim is to help communities reap financial benefit from an indigenous resource whilst preserving a bee species that will contribute to ensuring pollination of crops and maintenance of plant biodiversity in the long-term.

Himalayan honeybees in general, and *Apis laboriosa* (the Himalayan cliff bee) in particular, are little understood elements of mountain biodiversity. Yet they play an important role in mountain livelihoods and cultures in addition to their critical role in pollination. This study illuminates the key role of honey hunting in strengthening some mountain communities, and in infusing their specialised livelihoods with indigenous knowledge and spirituality. It illustrates the indigenous tools used in honey hunting and documents the honey hunting rituals, practices, and methods that are a crucial component of the indigenous knowledge. It also documents specialised information on nectar flow regimes of mountain floras and on bee migration. Previous reports have only been able to provide imprecise locations for bee cliffs, so that follow-up is very difficult. In this study, the precise position of bee cliffs was mapped with the aid of GPS (global positioning system) equipment, which will facilitate follow-up studies into nesting trends of bee populations and other phenomena related to their sustainability.

The authors have analysed the status and future prospects for *Apis laboriosa* and the associated honey hunting communities in Nepal. They address the many threats to this traditional system including the loss of interest among the sons of the increasingly aged honey hunters, population decline among the bees, and the problems caused by the new 'bee-tourism' business. They also

identify the new economic and biological opportunities and present specific recommendations for conserving this unique Himalayan way of life.

ICIMOD is grateful for the continued and valuable support of the Austrian Government for the Indigenous Bee Project, which is helping us to develop a strong system and network of farmers and development workers to counteract the many threats to the bees of the Himalayas. I hope that the study presented here will help decision-makers to appreciate the vital role played by indigenous honeybees and their hunters in the economy and sustainability of Himalayan communities, and encourage them to develop and adopt policies that will ensure their long-term survival.

J. Gabriel Campbell
Director General

Acknowledgements

We offer our sincere gratitude to our colleagues in ICIMOD and the management team for the contributions they have made to helping us to complete this phase of the study on indigenous Himalayan honeybees. We also highly appreciate and acknowledge the financial support provided by the Government of Austria's Ministry of Foreign Affairs, and the assistance, continuous support, and encouragement provided by Austroprojekt, Austria.

We thank the members of the Annapurna Beekeeping and Environment Promotion Group (BEENPRO), Kaski, our implementation partner, and HMGN's Departments of Forest, and of Hydrology and Meteorology for providing us with information. We are also grateful to the suggestions and inputs provided by Pratim Roy of the Keystone Foundation, India, Nicola Bradbear of the UK organisation Bees for Development, and our project colleagues Shova Bhandari, Uma Partap, and Aniruddha Shukla.

We would like to acknowledge the suggestions provided by Dr J. Gabriel Campbell, Director General of ICIMOD, which were instrumental in leading us to choose and implement Appreciative Participatory Planning and Action as the method of engaging the community in our activities and of gathering information. This led to a strategic shift in the way the study was carried out and allowed us to transform our understanding into process-oriented action. We also thank Chandi Chapagai of Plan International, Nepal for his support in the training for APPA without which this work would not have been possible. We thank Prativa Chhetri of ICIMOD and Chandra Sing Gurung of BEENPRO for taking some of the photographs. We are also grateful for the support provided by the editorial team A. Beatrice Murray Shrestha, Stephen Keeling and Sushil Man Joshi, and thank Govinda Joshi of MENRIS Division for preparing the map.

Finally, we wish to acknowledge our appreciation to the honey hunters of Kaski. We would not have been able to carry out this study without the assistance and cooperation of Midge Gurung, Min Gurung, Dhan Bahadur Bhujel, Kar Sing Gurung, Gopi Chan Gurung, Ananda Paudel and the many others who assisted us.

Executive Summary

ICIMOD's 'Indigenous Honeybees Project', supported by the Austrian Government through Austroprojekt, is involved in a wide range of activities in support of the indigenous bees of the Himalayas, including studying these bees and providing sound scientific information about them. As a part of this, the project is studying the Himalayan cliff bee, *Apis laboriosa* Smith, and the honey hunter communities that are associated with it. *Apis laboriosa* Smith was only identified as a separate species in 1980, and little detailed information has been published on it. The continued existence of this bee is threatened both by changes in habitat and by human interference, and this in turn foreshadows a loss of indigenous culture and knowledge in the honey hunting communities. This publication summarises the present state of knowledge about *Apis laboriosa* and describes the result of a detailed survey of nesting sites and the honey hunter communities associated with them.

Twenty-six nesting sites in the high mountain areas of the district of Kaski in central Nepal were studied in detail (all the sites identified in the district at that time). The sites were accurately located and mapped using a global positioning system, floral surveys were carried out, and the honey hunters and local people were interviewed. The technique of Appreciative Participatory Planning and Action (APPA) was used to gain the confidence of the local people, and to find out about the techniques and traditions of honey hunting, and to build the capacity of the honey hunters to support bee conservation and profit more from sustainable bee exploitation. The study team looked at the relationship between *Apis laboriosa* and the honey hunting communities, and assessed the importance of honey hunting for their livelihoods. The floral diversity around the nesting areas was investigated and a record made of the traditional equipment and methods used in honey hunting.

The investigations showed that most of the sites had similar locations in terms of aspect, distance from rivers, and vegetation patterns. Most of the cliffs with nests were located in river valleys facing southwest or southeast and were near rivers. Overall, both the number of nesting sites and nests, and the honey hunting tradition, were on the decline. This is believed to be due to a number of factors including land use changes, changes in agricultural patterns, increased outside job opportunities, outside interventions, and government policies. The study further investigated the

relationship between the forests, people, and bees and information was collected on the role of honey hunters in village society. Overall it appeared that the cultural aspects of the honey hunting system were more important to the communities involved than the economic aspects.

This study is intended to further understanding of the traditional balanced relationship between mountain societies and bees in the central Himalayas. We hope that the information will help to protect *Apis laboriosa* and assist the honey hunters to maintain their traditions and increase the economic benefits they gain from honey hunting.

Abbreviations and Acronyms

4Ds	discovery, dream, design and destiny
APPA	appreciative participatory planning and action
CBS	Central Bureau of Statistics (HMGN)
GPS	global positioning system
HMGN	His Majesty's Government of Nepal
ICIMOD	International Centre for Integrated Mountain Development
NGO	non-government organisation
NRs	Nepali rupees, the approximate rate of exchange in 2002 was US\$ 1 = NRs 78
PDDP	Participatory District Development Programme
VDC	village development committee

Glossary

colony	a social community of several thousand worker bees usually containing a queen and a few drones
honeydew	a sugary secretion produced by plant sucking insects that is deposited on the living parts of a plant
nectar	sugary liquid secreted by a special gland (nectary) found on flowers, leaves, or stems
pollen	a granular mass of spores in the anther of a flower
pollination	the transfer of pollen grains from the anther to the stigma of the same or a different flower of the same or a different plant of the same species
weeds	(mostly exotic) plants with an undesirable and overwhelming rate of multiplication

Gurung words

abakarbhū	deities present around the bee cliffs who watch over the honey hunting events
ayar bhayar	religious ceremony performed in remembrance of those in a village who have died
chhora	filter made from bamboo and used for filtering honey
chhyakal or khaal	lamb's skin used to line the collecting basket to prevent honey from leaking out
donga	wooden bowl used for collecting wax
ishar piba mhi	person who gives signals and instructions during honey hunting
koho chho	rope used to fasten honey hunters to their ladders
koili chho	rope with a hook attached, used to separate the brood portion from the honey portion and pull the honeycomb away from the cliff
kuiche	lead honey hunter who climbs/descends the cliffs and cuts the combs
kyar	bamboo stick used to balance the basket (korko, see below) whilst collecting honey
pechho chaiba	
piba mhi	person who controls the rope during honey hunting

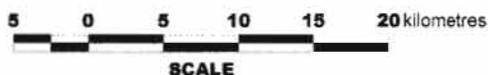
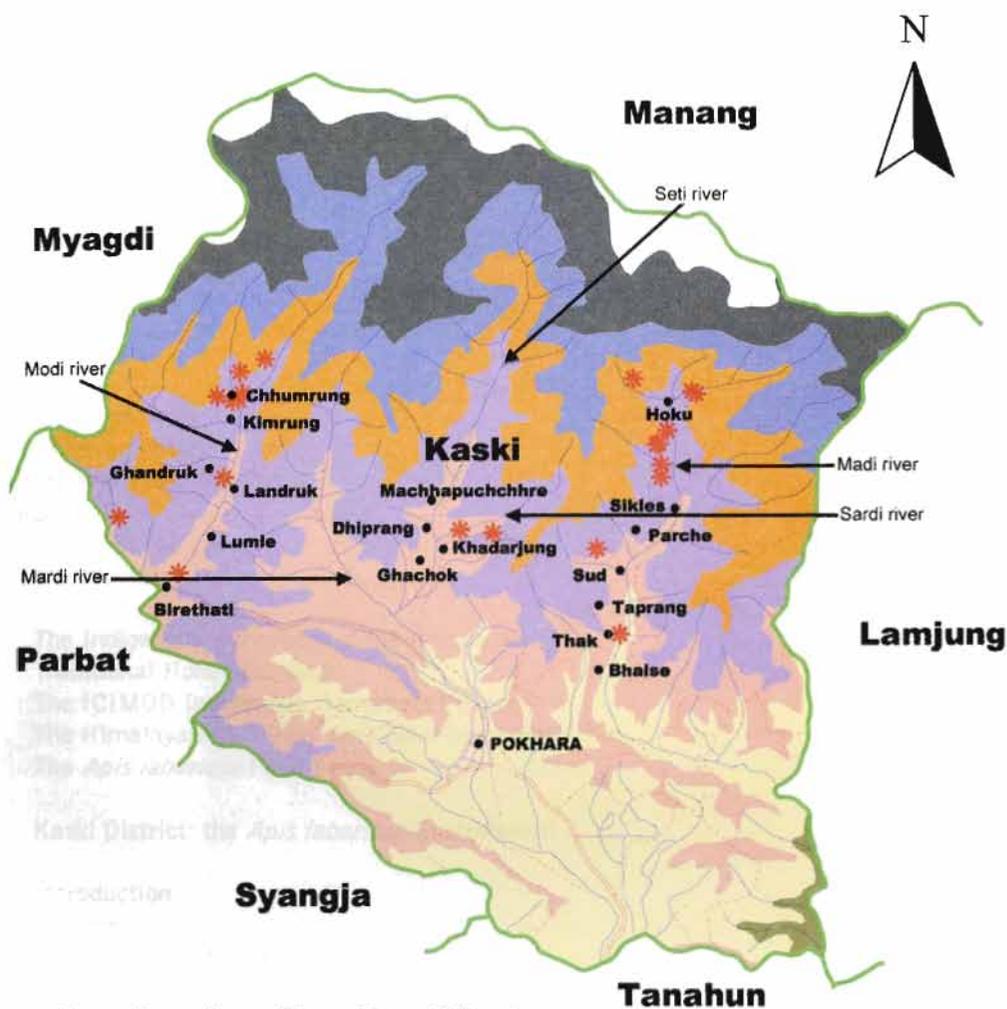
pechho	rope on which the basket (korko) is hung
prang	ladder made from mountain bamboo and used by the honey hunters to scale the cliffs
sato	bamboo stick with a notched end on which a hook can be fixed
saaton	bamboo stick used to guide the hook attached to the koili chho into the comb, also about 7m long
sharun	five-day period that occurs every month in the Nepalese Bikram Sambat calendar, it is fixed according to the position of the planets.
tango or ghochma	bamboo stick with a sickle or wooden plate fixed on the end, used to cut honeycombs
thane mane	the local gods who are believed to watch and direct local events
tuju	rope used to balance the ladder
uab	rope used to tie the ladder to a tree trunk at the top of the cliff
whibe	bamboo fibre rope which is used to direct the ladder

Nepali words

korko or tokari	a bamboo basket for collecting honey
dabilo	wooden or iron plates fixed on to a bamboo stick and used to cut honeycombs
mukhiya	village chief
pattro	a (religious) lunar calendar covering the whole year with details of all the significant days (auspicious and inauspicious days for particular everyday and special actions and ceremonies), normally prepared by a priest
pujari	priest

Note: There is still no formal concensus on the spelling of place names, or the transliteration of Nepali or Gurung words. In the text we have chosen the spellings that most closely approximate the sound system.

Apis laboriosa Nesting Sites and Associated Communities in Kaski District of Nepal



LEGEND

- District Boundary
- River
- ROADS**
- Highway
- Metalled
- Earthen
- Main Trail

- Village Location with Nesting Sites
- * Nesting Sites of *Apis laboriosa*

ELEVATION ZONES

- Above 6000 m
- 4500 - 6000 m
- 3500 - 4500 m
- 2500 - 3500 m
- 1500 - 2500 m
- 1000 - 1500 m
- 500 - 1000 m

Table of Contents

Foreword	
Acknowledgements	
Executive Summary	
Abbreviations and Acronyms	
Glossary	
1 Introduction	1
The Indigenous Honeybees of the Himalayas	1
Traditional Honey Hunting	1
The ICIMOD Indigenous Honeybees Project	2
The Himalayan Cliff Bee: <i>Apis laboriosa</i> Smith	4
The <i>Apis laboriosa</i> Field Study	6
2 Kaski District: the <i>Apis laboriosa</i> Environment	11
Introduction	11
Climate	11
Socioeconomic Setting	11
Vegetation and Bee Floral Resources	12
3 The Nesting Sites and Bee Behaviour	17
Physical Aspects	17
Seasonal Migration	18
Predation	21
Declining Nest Numbers	22
4 Honey Hunting in Kaski	25
Introduction	25
Honey Hunting Tools and Equipment	25
Honey Hunting Techniques	25
Traditional Beliefs and Practices	35
Honey Productivity	36

5	The Social and Economic Dimensions of Honey Hunting	37
	Institutional Arrangements and Ownership	37
	Profile of the Honey Hunters	38
	The Cash Economy	38
	Overall Community Benefit	41
	The Dreams of the Honey Hunters: the Results of the First APPA Field Exercise	41
6	Issues, Opportunities and Recommendations	43
	Major Issues	43
	Opportunities/Needs	47
	Recommendations	48
	Bibliography	51