
Karakorum Himalaya

SOURCEBOOK FOR A PROTECTED AREA

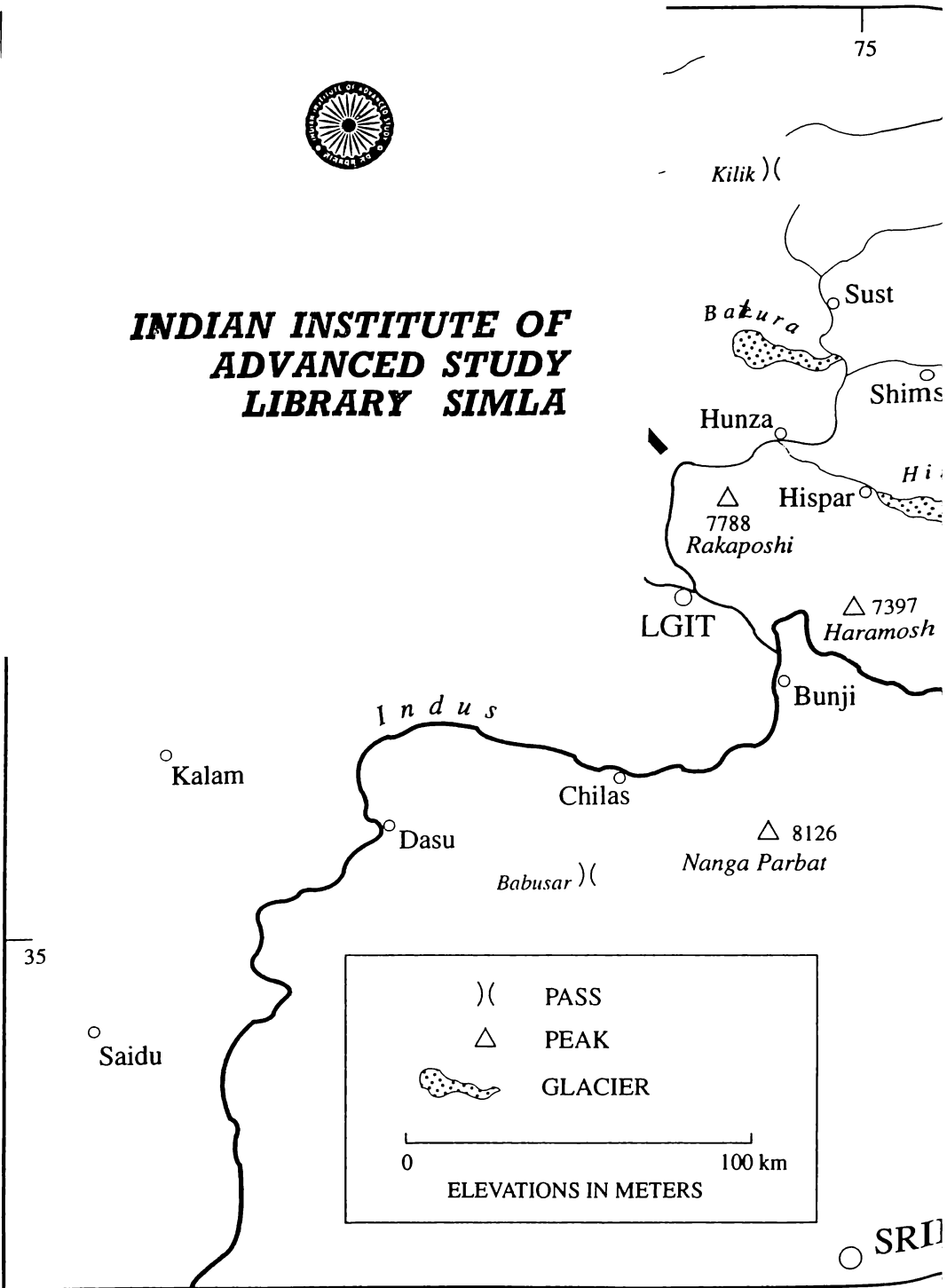
Nigel J.R. Allan

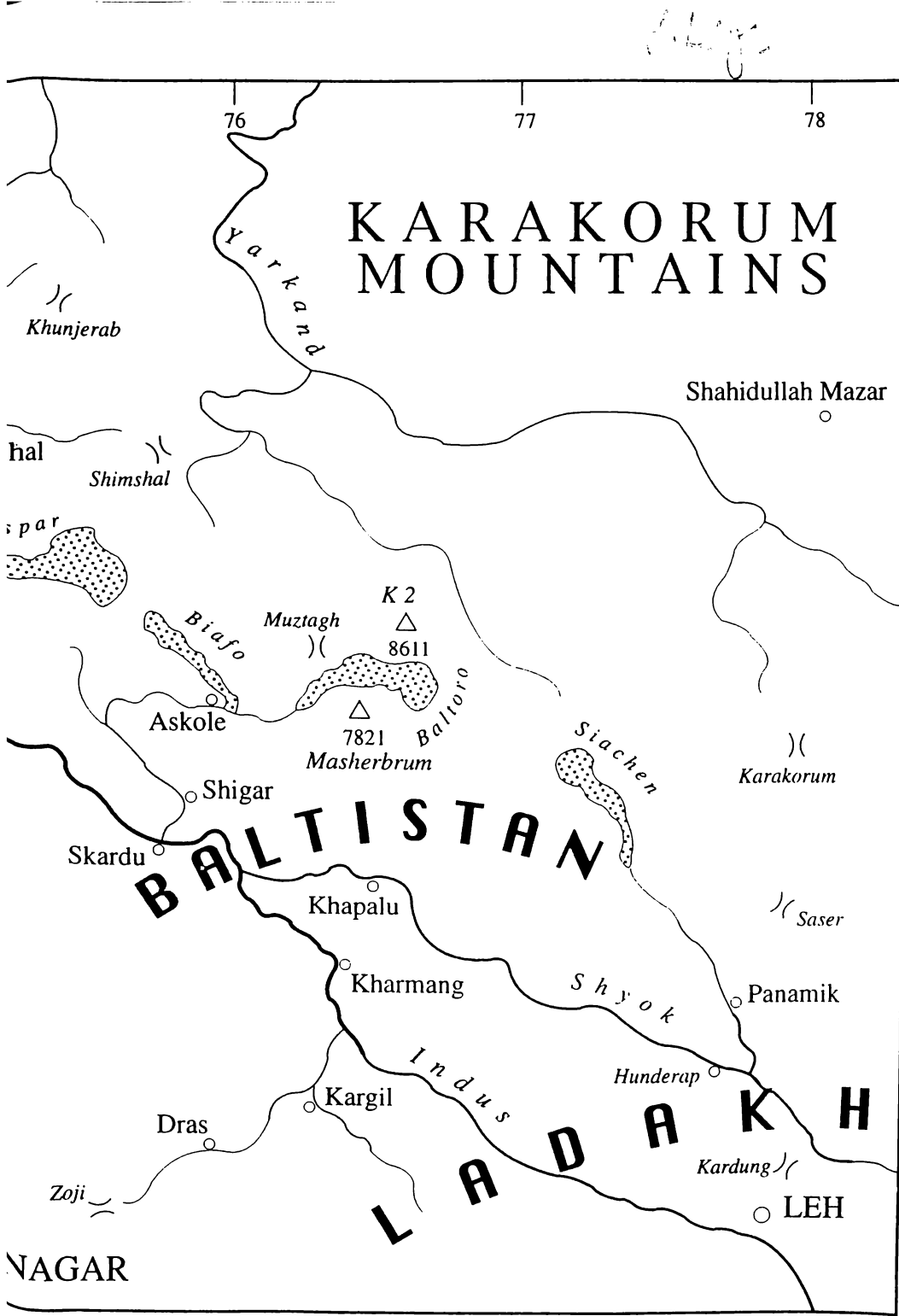
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Karakorum Himalaya: Sourcebook for a Protected Area

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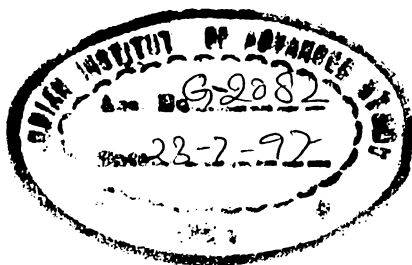
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Preface

This sourcebook for a protected area has its origins in a lecture I gave at the Environment and Policy Institute of the East-West Center in Honolulu in 1987.

The lecture was about my seasons of field work in the Karakorum Himalaya. Norton Ginsberg, the director of the Institute, alerted me to the fact that the *Encyclopedia Britannica* would be revising their entries on Asian mountains shortly and suggested that I update the Karakorum entry. The eventual publication of that entry under my name (Allan 1992), however, omitted most of the literature references I had accumulated. As my reference list continued to expand I decided to order them in some coherent fashion and publish them as a sourcebook to coincide with the IUCN workshop on mountain protected areas in Skardu in September 1994.

I could not have published this book without the goodwill and cooperation of a number of colleagues and others who share my interest in the Karakorum Himalaya and mountain protected areas. The staff of IUCN have been most helpful. On the international side, Jim Thorsell, Senior Advisor on Natural Heritage, and Larry Hamilton, Vice-Chair for the Mountain Protected Areas section of IUCN, provided encouragement in the preparation of this bibliography. P.H.C. Lucas, Senior Advisor to IUCN for the Committee for National Parks and Protected Areas, clarified the "Associative Cultural Landscape" category of the World Heritage Convention. In Islamabad, Abdul Latif Rao prepared the way for publication with the encouragement of Stephan Fuller and Arshad Gill. Dhunmai Cowasjee and Saneeya Hussain of the Karachi office of IUCN saw my draft through to publication.

Like so many other scholars and scientists working in the Greater Himalaya, one has to thank Lucette Boulnois and Pierrette Massonnet, and the staff of the Centre Nationale de la Recherche Scientifique, Centre d'Etudes Himalayennes Library, in Meudon, France, for their painstaking collection and collation of all materials on the Himalaya-Karakorum-Hindukush, which results in the annual publication of their acquisition list.

Many colleagues brought important references to my attention, including John Bray in his excellent bibliography on Ladakh, Henry Osmaston on the eastern Karakorum, and Dave Butz, Farida and Ken Hewitt, Are Knudsen, Ken Macdonald, Kim O'Neil and John Mock, and Jack Shroder, on Baltistan and Gilgit. Irmtraud Stellrecht, the leader of the German Culture Area Karakorum project, and her colleagues, were especially helpful in providing historical material. Rod Jackson and John Fox introduced me to Literature on

the fauna of the Karakorum, Dan Blumstein gave me material, especially "grey" literature on wildlife and vegetation found in the Karakorum. Shoaib Sultan Khan of the Aga Khan Foundation provided access to Gilgit records and activities. Luo Qian Chang, Vice President of the Xinjiang Agricultural College in Urumchi, contributed important material for the Karakorum area in China as well as assisting me in my travels in the Sarikol and Shaksgam areas of Xinjiang in the mid 1980s. Helena Norberg-Hodge gave me complete access to her library holdings in Leh. In California, Dena Bartholeme assisted me in tracking down and providing examples of rare books on the Karakorum Himalaya.

Bernd von Droste, Director, and Mechtild Roessler of UNESCO's World Heritage Centre provided documentation assistance. I am grateful to Karl Ryavec, a Tibetologist and scholar of the Inner Asian ecumene, for drafting the Karakorum Himalaya map that accompanies this book. Not the least acknowledgement should be to David Sonam Dawa of Leh whose prompt attention to my dire straits rescued me from high altitude pulmonary edema.

The sourcebook could not have been compiled and produced without the financial support of the United States Information Agency. Its annual appropriations to the American Institute of Pakistan Studies, and the academic endorsement by AIPS director, Charles H. Kennedy, supported my field research over the entire Karakorum mountains for many years. I am also deeply indebted to Barry C. Bishop and to the Committee for Research and Exploration at the National Geographic Society who supported me for many years on the South Asian mountain rimland to Inner Asia, the U.S. National Science Foundation, and the U.S. National Research Council, Division of International Programs.

While in Pakistan my home-away-from-home has been the United States Education Foundation office in Islamabad. For many years its staff has been supportive of my peripatetic ways and has nursed me through a variety of ailments. Equal thanks must be extended to my wife and daughter who have tolerated those peripatetic ways and nursed me through the lingering after-effects of various ailments.

Because a bibliography is all about books and associated materials I think that it is appropriate to dedicate this book to the memory of Ghulam Mohammad Beg, whose book shop in Gilgit was always a hub of activity among Karakorum devotees. His tragic death in a plane crash in August 1989 while on a trip down to Islamabad, undoubtedly to order and buy more books about the Karakorum mountains and adjacent regions, was mourned by all his patrons and friends.

Nigel J. R. Allan

Skardu, Baltistan
September 1994

Introduction

As a schoolboy I was well acquainted with the Karakorum Himalaya. I had five library cards to check out books from the innumerable public libraries that Andrew Carnegie had bequeathed Scotland and I had discovered the *Scottish Geographical Magazine*, which over this past century had probably published more articles on the Karakorum Himalaya than any other journal. Reading about bygone adventurers and explorers in the Karakorum was a pleasant diversion from the cold, wet, stultifying conditions of growing up in post-war Britain. Adventurers, of course remain, today we call them adventure travelers in all their variant pursuits: mountain climbing, mountain biking, trekking, rafting, and so on. And we still have people who think they are “exploring” the Karakorum mountains. Despite the criticisms heaped upon these people, they all possess that positive attribute of finding value in the biophysical environment. Problems arise, however, when members of an alien culture impinge upon the values and beliefs of the local inhabitants. To ameliorate conflicts that might arise in such a situation it is necessary to formalize local rights to resources, whether they are water, arable land, pasture, hunting, and rights of access. One aspect of this action is to reward stewardship of the land by the indigenous inhabitants, and another, more modern one, is to enshrine some hallowed land under some form of protection or conservation as a legacy for forthcoming generations. This sourcebook was compiled as an aid to formulating how the Karakorum Himalaya might emerge under the category of being a “Protected Area”.

Foremost in any environmental design process for creating a protected area is the requirement for enhancing the quality of life of the local population through the development and preservation of the mountain landscapes that are meaningful, relevant and sustainable: meaningful in that they reinforce the sense of community, sense of place, and sense of self; relevant in that they provide a solution to environmental problems rather than contributing to them, and sustainable in that they embody long-term, perpetually beneficial relationships between human culture and the physical/natural environment. The first step for the design process is to make an inventory of all the available pertinent literature sources on the designated area. This sourcebook fulfills that initial quest.

Protecting a mountain range that is riven by the nation-state boundaries of three countries is no easy task. We have seen elsewhere in the Himalaya that one area designated as a national park, Mt. Everest

(Sagarmatha/Chomolungma), although it has experienced teething problems, has been expanded into a cross-border park with a massive appendage in Tibet Autonomous Region, China, and now also further to the east, in the creation of Makulu-Barun protected area (Taylor-Ide 1995). It is to be hoped this example of cross-border agreement of protected areas might assuage any local territorial conflicts in those areas designated as protected.

In the outline of this sourcebook I have followed the format of the UNESCO World Heritage Centre nomination form for a World Heritage Site. There are some problems associated with the UNESCO format, not the least of which is the bifurcation of the natural (biophysical) landscape separated from the cultural landscape. The International Union for the Conservation of Nature (IUCN) has abundant experience in preparing Natural Heritage Site nominations and for executing the designing of protected areas. The International Committee for Monuments and Sites (ICIMOS) nominates Cultural Heritage Sites. In Groetzbach's (1988) "Typology of High Mountain Regions" the Karakorum habitat and society would fall under Type A, 1, a: "Population of Mountain Peasants"; therefore it is necessary to document the symbolic aspects of the Karakorum that are held by the local population. The recent designation of Tongariro in New Zealand's north island and the Uluru-Kata Tjuta National Park (Australia's Ayers Rock and the Olgas) in the new category of the UNESCO World Heritage Site, "Associative Cultural Landscape," done in conjunction with ICIMOS, is a welcome recognition of the way in which the indigenous populations, create, value, and adapt to their environment. This new category supplements the UNESCO Natural Heritage Site appellations already bestowed upon Tongariro, a volcano, and Ayers Rock, an inselberg, by UNESCO. The Karakorum residents, occupants of the greatest collection of high mountains in the world, deserve similar recognition.

The dichotomy between natural and cultural literature on the Karakorum shows up dramatically in this sourcebook. For every five hundred geology articles on the Karakorum mountains we have less than one article that might give us an insight into how the indigenous population creates and values its habitat. For example, the Karakorum Himalaya is almost the last place on earth where the Neolithic goat cult, which was once common from the Alps to the Himalaya, still plays a role in the management of livestock. Parkes (1987) gives us an insight into these practices still prevalent in the region. Before any portion of the Karakorum is classified as a protective area it is mandatory that the connective relationships between humans, the biophysical environment, and animals be explored and documented.

During the construction of this sourcebook I have been uncomfortable in assigning citations to categories that are not of my own making. As a Scotsman and now latter-day Californian, I am uneasy about the social

construction of the term "Protected Area". In Scotland, there is no such protected area as a "National Park". As Terry Coppock has explained, the Scots do not need a national park because they have a set of vernacular rights and obligations that impose certain behavior on all Scots in the countryside. Scots law, unlike the laws of England, assigns the citizenry the obligation to protect the biophysical environment. It is rights and obligations of this type that are, unfortunately, not documented in this sourcebook for the Karakorum mountains because no literature on the topic exists. Furthermore, in compiling this sourcebook I have taken some liberties in allotting sources to various categories. In designating part of a mountain range as a protected area it is helpful to refer to the experiences of other countries in constructing national parks and protected areas. Duncan Poore's (1993) guidelines are simple yet applicable to almost any mountain area. Thorsell and Harrison's (1995) vast compilation of all mountain protected areas in the world and the criteria by which they were created is regarded as the foundation for the designation of future protected areas where natural heritage is dominant.

Aschoff (1991) in his bibliography lists over seventy specialized Himalayan bibliographies on a great variety of topics. My sourcebook is not an exhaustive survey of the Karakorum mountain range of the Greater Himalaya but one that only focuses on the greatest collection of high mountains in the world as an ecumene. I have done field research in all four segments of the Karakorum Himalaya: the Western section, west of the Hunza river; the northern portion to the east into Xinjiang Province of China; the central bastion in Gilgit and Baltistan; and the eastern Karakorum bounded by the big bend of the Shyok river, which is in northern Ladakh. I have also flown across the Karakorum several times so I have a clear idea of what this place looks like. But on the ground there is too much material for one person to comprehend; hence I have relied on colleagues to supply some necessary information compiled for my edited book, *North Pakistan: Karakorum Conquered* (New York: St. Martin's Press, 1996). Karakorum habitat and society cannot be viewed as a discrete entity; I have therefore included coverage of the contiguous regions especially in the west, the Hindukush valleys and even the Pamirs, in the south in that interesting nineteenth century social/political construction called Dardistan, better known as the upper Indus tracts, and to the east in Ladakh, which is so well known through the medium of the literary Tibetan language. Much less covered is the northern area bordered by the Oprang and Shaksgam river and everything to the north, despite my efforts in Kashgar, Urumchi, and Beijing to uncover more pertinent materials. My coverage of non-European language material is almost zero. Where possible I have included English translations of Tibetan, Urdu and Persian works. For more general sources on the adjacent area the reader should consult Aschoff's excellent

bibliography.

In listing the principal features that would comprise a designation as a "Natural Heritage Site" I have only listed general works or historical documents relating to geology, glaciology, and geomorphology. There are now two excellent edited books for coverage of geology, glaciology, and geomorphology of the mountains (Michael Searle, editor, *Geology and Tectonics of the Karakoram Mountains*, New York: Wiley, 1992, and John F. Shroder, Jr., editor, *Himalayas to the Sea*, London: Routledge, 1992). There is no need for me to duplicate the extended coverage in these books and the long list of referenced literature that appears in them.

The Karakorum people are integral parts of an intercontinental system. In the days of the trans-Himalaya trade they were part of a great regional communication network. My guru, the late Agehananda Bharati, would agree with me. From him I learned that the Karakorum Himalaya, like the rest of the Himalaya, are frequently perceived as a mountain barrier for South Asia. This metaphor is grossly over wrought. Like Professor Bharati I like to think of these mountains as a part of an international highway between Inner Asia and South Asia. Despite this historical role there is very little literature about the indigenous culture in this region, especially in Baltistan and Gilgit. Ladakh is much better documented with Snellgrove and Skorupski's volumes and Martin Brauen's study. Much of the scholarly literature that does exist is not in English. Comprehensive coverage in Gilgit and Baltistan is very thin and information about local ideas and beliefs about mountains is particularly scant. These lacunae prevent the Karakorum from being considered as an "Associative Cultural Landscape". Although not within the immediate territory under examination here, it is worth mentioning the Kalasha community in southern Chitral as an example of a site much better documented. This small community is analogous to the Khumbu Sherpa in that it has generated a substantial literature, with contributions from the Cacopardos, Darling, Glavind-Sperber, Pahwal, K. Hewitt, Parkes, Siiger, and now Maggi. The unique culture of these people provides us with insight into the indigenous population of many centuries ago. Yet another example is Dah village, on the Cease-fire Line in Ladakh that was never Tibetanized, Hinduized, nor Islamicized. Such landrace communities give insight into the current thoughts of habitat and society in these mountains.

Since the early part of the century, and indeed one can go back to the days of the Schlagintweit brothers in the middle of the last century, the topic of Karakorum physiography has dominated field research. Knowledge of climatic processes is less well known but the work of the Canadians in the past decade has added immeasurably to our basic knowledge. For information about local vegetation the reader need only look at Schweinfurth's 1957 vegetation map of the Himalaya to find a benchmark

that has seen little improvement in filling in the blank portions of that map as they relate to vegetation cover.

Hunting wildlife is firmly entrenched in the local culture. Unfortunately, much of the wildlife has been eradicated, most of it by former colonial officers on leave and, with the creation of Pakistan, by local hunters well equipped with accurate high powered rifles. Hunters are, however, accurate reporters of the status of wildlife. The old accounts of hunting provide a detailed view of the amount and dispersal of the wildlife. Trophy hunting was very much the objective of visitors to the Karakorum in the Imperial area. (One geography department created during this period was at Oxford University, and it is no surprise to find today in the main hall of its baronial quarters a large display of the horns of Gilgit Agency fauna: blue sheep, urial, ibex, Marco Polo sheep, markhor and chiuru among others.) Any creation of a protected area must include not only a consideration of the remaining fauna but a knowledge of wildlife once found in that area if we are to understand the ecological relationships found there. Pakistan's experience with protected areas in mountains, the Chitral Gol and Khunjerab parks, has had a checkered existence. Poaching of wild animals is rampant, and the influence of local elites in hunting severely damages the integrity of the protected areas. Aside from continual hunting, the other major issue is the entitlement and obligations of graziers in these protected areas. Because the summer graziers, almost all of whom reside outside the protected areas in question, have only informal rights to grazing, any attempt at just compensation for the prohibition of traditional activities in the protected area is difficult. In northern Gilgit district, graziers with hereditary rights of access to mountain pastures have, on a sporadic basis, been banned from grazing their animals in the Khunjerab National Park. This has led to a brouhaha with local officials as Wegge (1991) has discussed in the popular literature on the Himalaya. For the creation of any new protected area in the Karakorum it will be necessary to plot all the traditional grazing areas that the surrounding residents have used. Moreover, these informal rights will have to be formalized through legal procedures to enable the residents to receive compensation for perceived loss of grazing rights.

What is much less known about land and life in the Karakorum are the systems of indigenous land tenure, water allocation, grazing rights, and especially the religious, artistic or cultural associations with the natural element. Many of these traditional livelihoods are now in a state of flux as men and boys renounce the lonely life as shepherds and seek cash labor in the lowlands or in the armed services. (I can empathize with the desire of these people to find more amenable labor, having been a fourteen-year-old full time shepherd in the drenching landscapes of the Western Highlands of Scotland.) Much of the local law has never been codified and remains

the knowledge of community appointed men who adjudicate disputes about land, water, pastures, and territory. With the emigration of many young men to the urban areas women's roles have changed as they have had to assume male jobs in the subsistent household in addition to their extensive domestic duties. The problems created by male emigration are only now being explored and are not yet well documented.

By the end of the nineteenth century photographic developing and printing was being accomplished in the field. European visitors were surveying and photographing the high peaks and glaciers of the Karakorum in order to authenticate their travel and climbing achievements. Some of these early photographs, for example those by Sella, are excellent. Most of the books published today on the Karakorum are greatly embellished by high quality photographs taken during climbing expeditions. Sometimes disputes about nomenclature were the subject of heated disputes in Victorian Britain where the Royal Geographical Society did not allow Britishers to have their names given to topographic features. Hence problems in nomenclature remain as can be seen in the dispute about the triglossal "K2", a surveyor's designation, but which also bears the name of Godwin Austin, an early surveyor, and Chogori, a local name given by travelers through the Mustagh Pass. For nomenclature in English in this sourcebook, there is no need for me to disagree with the toponymic conventions of Marc Aurel Stein, a foremost early European scribe of this region: Karakorum not Karakoram, Hindukush not Hindu Kush, and Himalaya not Himalayas.

Geographers see the world through a different prism than others, hence my inclusion of all segments of the Karakorum mountains and adjacent regions in this sourcebook. The fact that the region is divided today among three different nation-states in the twentieth century is no reason to ignore the inherent historical geography found here. The Greater Himalaya mountains were known for their role in acting as conduits for the trade between South, and Central and Inner Asia. To give just one example of how little they acted as a barrier to commerce, *gur* (raw sugar) was transported from India in the nineteenth century across the mountains to Khotan where it was processed into confectionery and then carried back across the mountains to India where it was sold at a profit. Many of the historical sources cited in the sourcebook portray life as it was in the Karakorum while much of life today bears little connection with the past. For a foray into the intellectual history of Europeans in the Karakorum Himalaya the reader must consult the excellent essay by Hewitt (1989) on that topic.

As a schoolboy my mind was fixed on those bombastic Scots who bullied and bashed their way into the mountains in these parts. Some had genuine contributions to make like Mountstuart Elphinstone and George Scott Robertson on the Hindukush people and culture and Forsyth's expedition across the Karakorum to Yarkand. Who can forget "Bokhara" Burnes

getting hacked down in Kabul or the painting of Surgeon-Major Brydon, from the Orkney Islands, slumped on his pony staggering into Jalalabad, the sole remnant of the much vaunted Army of the Indus. These people and others were prominent in the imagination of the Scots last century and were remembered for their exploits: Hayward getting his head lopped off in the western Karakorum, Dalgleish leaving his bones on the Karakorum Pass, and Macartney defending Chinabagh in Kashgar against the "Oriental" mobs. Of course the invaders were not all Scots; the English and the Continentals were at it too. Their graves testify to the range of their territory in and around the Karakorum mountains; Marc Aurel Stein and Henning Haslund-Christensen are buried in Kabul and the Moravian naturalist Ferdinand Stoliczka in Leh. I have included in the sourcebook many historical accounts of adventurers such as these in this region because the reader often gets a view of bygone life and landscape in their accounts of travel, and their hunting and shooting of a great variety of wild animals that once populated this area.

In the western Himalaya the creation of mountain parks has come on the heels of a massive road building program for military and political strategic reasons. Along these roads now come many tourists of various persuasions. Only now in the high Himalayan border country are places like Lahaul and Spiti being opened up to tourist activity. Before long it will be necessary to set aside some of these areas as protected. Ladakh presents a different situation because it is a prime destination for the European who has a short summer holiday. A week down to Agra to see the Muslim Taj Mahal, another week in Jaipur and Rajasthan to see the Hindu palaces, and a final week or ten days to visit Buddhist Ladakh and a short trek, and then off to Europe to return to work on Monday morning. For the more adventurous in Ladakh the tourist can go north over the Khardung Pass—the highest road in the world—down into the Shyok and across to the Nubra valley in the eastern Karakorum.

As yet none of northern Ladakh is designated as protected but the rationale behind the creation of a protected area is very much alive in the recent creation of Hemis National Park, which is formed around a viable snow leopard community in the Markha Valley south of the Indus river. The lesson to be learned from the creation of protected areas elsewhere in the Greater Himalaya is that it requires experts to delineate all the competing claims to the land designated to become protected, and more experts, local and expatriate, to enumerate the status of wildlife in the protected area, and an intense knowledge of the indigenous community and its cultural practices. Inexorable pressure from tourists now makes the creation of protected areas necessary for the maintenance of local stewardship of the land and access for all to highly desirable leisure landscapes.

Much of the tourism literature is focused on mountain climbing expe-

ditions. Issues of the *Alpine Journal* and the *Himalayan Journal* over the past two decades, since these mountains were reopened for mountain climbing, will bring the readers up to date on these activities. There are also large numbers of books written by the modern climbing fraternity about their exploits. All of this literature has a Eurocentric view and contributes little to our knowledge of habitat and society in the Karakorum. There is, of course, the occasional exception, like the contributions of Wilhelm Kick over the years who brought to our attention the scientific contributions of the Schlagintweit brothers of last century.

Another issue at the forefront is the accommodation for large numbers of tourists in this region. In Ladakh several Airbus 320 flights arrive each day during the tourist season, principally summer because it is dry, and they are accommodated in over 100 hotels of variable quality in Leh. In addition, the conflict in the Vale of Kashmir has not interrupted the flow of tourists because the overland tourists now travel by bus from Manali in Himachal Pradesh over several 5000m passes to the Indus valley and then downstream to Leh. The Karakorum mountains in Gilgit and Baltistan have yet to experience a fraction of this tourist load on their facilities. The number, however, is rising and within the past two years the Aga Khan Foundation has given program assistance to Gilgit villagers in developing simple, hygienic overnight accommodation for foreign tourists. Among Himalayan countries Pakistan has taken the lead in setting a fixed rate and schedule of payments for using porters in the high country.

In this century, the Karakorum mountain literature has been dominated by climbing accounts. Many of these are covered in Dorothy Middleton's introduction to the Miller (1983) books on a surveying expedition to the Karakorum celebrating the 150th anniversary of the Royal Geographical Society. The dominant theme of these and similar volumes is the jaded view of Europeans looking at local culture. On some occasions, these views border on racism as seen in the four books and twenty-three articles written by Reginald Schomberg that I managed to unearth at the library of the Royal Geographical Society. The authors were products of their day, as Schomberg was, and his views may seem more understandable in the context of his time, but similar views of indigenous people, Fourth World people as some would have it, regrettably remain in many contemporary books on expeditions to the Karakorum. A reader of the Karakorum literature need only consult the products of two prominent mountain photographers, one American and the other Japanese, to discern the bigoted gaze by the First World elite of the indigenous inhabitants. Butz and MacDonald have done much to sensitize us to these distorted views, not only of Europeans but those exhibited by Indians and Pakistanis from the urbanized plains.

For the Karakorum territory not at the eastern end, essentially encompassing Baltistan and Gilgit, I have included a substantial amount of "grey"

literature gleaned from the Pakistan Forest Institute library in Peshawar, the IUCN library in Islamabad, and the AKRSP library in Gilgit. By “grey” literature I mean agency reports, consultants’ reports, and any other material that is not published in a formal sense. Much of this literature is of considerable utility but it never sees the light of day because it is buried in bureaucracies.

I have listed many archaic accounts, especially of the last century, to portray the important role that the Karakorum residents once had in this area, “The Crossroads of Asia”. A vestige of that importance is the presence of feral Bactrian camels wandering in the buckthorn bushes of the Shyok river. These animals, along with yaks and ponies, were the beasts of burden that carried the commerce between the two cultural strongholds of South and Inner Asia.

This sourcebook is not only designed for the bureaucrat or scholar but also for the informed lay person; hence it is to be hoped that the reader will delve into the large historical literature that exists on the Karakorum mountains. Many of the books referenced are now available at bargain prices in reprint form. A caveat, however, is in order, in that many portrayals of the Karakorum landscape and people are imperialist constructions. (A powerful antidote to this literature is Peter Bishop’s *The Myth of Shangri La* (1989) about the European social construction of Tibet, especially in the nineteenth century.) No coverage of the Karakorum could be complete without listing the “classics” that are written in European languages about “explorers” of the last century. A good place to start would be the biographies: Garry Alder’s excellent account of Moorcroft (most of southern Leh is now called “Moorcroft’s garden”), Josef Kolmas on Stoliczka, Jeannette Mirsky on Aurel Stein, and Gerald Morgan on the legendary Ney Elias. While I was on a visit to the University of Innsbruck in 1983, Klaus Frantz brought to my attention the mounting literature on the Schlagintweit brothers, Adolph, Herman and Robert, who were pioneer scientists in this part of the world. Wilhelm Kick and others, including a Schlagintweit descendent, have contributed to a special volume (Mueller, Raunig 1982) on these three remarkable brothers.

Some key works are cited by Brauen on Ladakhi society, Berger and Buddruss on Baltistan and Gilgit; a study of these will provide the reader an entry to the intense details of the social and linguistic components of the region under consideration. John Bray’s extensive bibliography focusing on Ladakh should be consulted for further reading in that eastern end. Scholarly scrutiny of the Ladakh end of the Karakorum is much more extensive than the Baltistan and Gilgit portions. European writing on Ladakh appeared much earlier, no doubt because of the more frequent access to cynosures like Leh and the added facility of the literature in the Tibetan language. As an example, one need only cite the prodigious output of Au-

gust Francke who produced more than seventy publications about the region. He wrote about Tibetan petroglyphs found on the Darkot Pass off to the west of the Karakorum and of the Christian Nestorian petroglyphs found in Tangtse far off to east, all of which lend an air of the historical ecumenical diversity of the Karakorum region. Karl Jettmar has added considerably to our knowledge of the travelers from the past who have criss-crossed the Karakorum.

John Bray has also dealt with the role of the Moravian mission in Ladakh. Lest anyone think that their activities were only confined to religion, it was the Moravian missionaries who recorded daily meteorological measurements atop the mud brick tower built well over a century ago by the Survey of India, which lies in ruins today down an alley opposite the entrance to the Moravian Mission school in Leh. These records were used by Ellsworth Huntington to buttress his arguments set forth in *The Pulse of Asia*. Huntington's environmental determinism was meant to be an antidote to Darwinism but eventually fell out of favor in the 1920s; strangely, it rears its ugly head whenever authors write about mountain people in the geoecology paradigm.

I have refrained from becoming immersed in the conflict over Kashmir. Among the vast amount of literature on this topic are the listings in Warikoo's bibliography on Kashmir. Garry Alder and Alastair Lamb provide exceptionally sound commentaries on this topic. Wirsing (1993) analyzes the Siachen glacier situation.

In summary, this sourcebook has a two-fold purpose. One obvious objective is to highlight the role of protected areas in and around the Karakorum Himalaya. But it should also bring to the reader's attention the rich literature that exists on the Karakorum Himalaya and the adjacent territory. By today's standards the lay person might regard the residents as remote and isolated but these descriptors mask the vital role that these people played in centuries past. This place was indeed the "Crossroads of Asia" and the local people had a vital role in this transcontinental highway.

Finally, it is to be hoped that this sourcebook for a Karakorum protected area will provide some assistance to the sojourner in the Karakorum Himalaya who values and enjoys this unique and treasured place.

1

History

Natural Heritage

Geology

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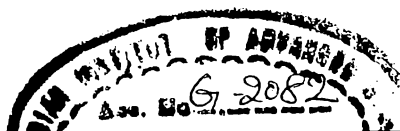
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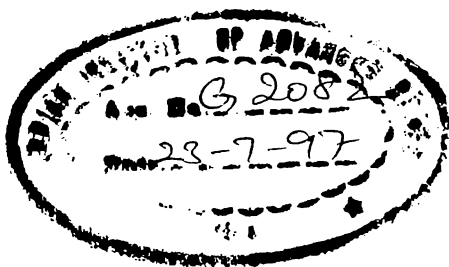
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The Author

Nigel J.R. Allan was born in Scotland and had the uplands of that country as his introduction to the land beyond the lowlands. He became a shepherd on a Western Highlands mountain sheep farm in Scotland at the age of fourteen, and later did his National Service as a Royal Marines Commando in the Troodos Mountains of Cyprus. Upon his arrival in the United States he worked for Dr Chester C. Housh who was responsible for relocating the local inhabitants of the Blue Ridge Mountains of Virginia when America's second most visited National Park, Shenandoah, was created. Prof. Allan later designed appropriate recreational landscapes in the Rocky Mountains for the U.S. Forest Service while a faculty member at the University of Wyoming. He first saw the Himalaya in 1966 when he lived and worked in India for a year with USAID and travelled to Kashmir and Nepal. Since then he has lived in and done extensive field research throughout the Hindukush-Karakorum-Himalaya, including Afghanistan, Tajikistan, Xinjiang and Tibet Autonomous Region of China, Pakistan, India, and Nepal. He has published *Human Impact on Mountains* (with G.W. Knapp and C. Stadel), *Mountains at Risk: Current Issues in Environmental Studies*, and *Karakorum Conquered: North Pakistan in Transition*. He is Professor of Geography at the University of California at Davis. He also serves as Research Affiliate in the Center for South Asian Studies at the *University of California, Berkeley*.



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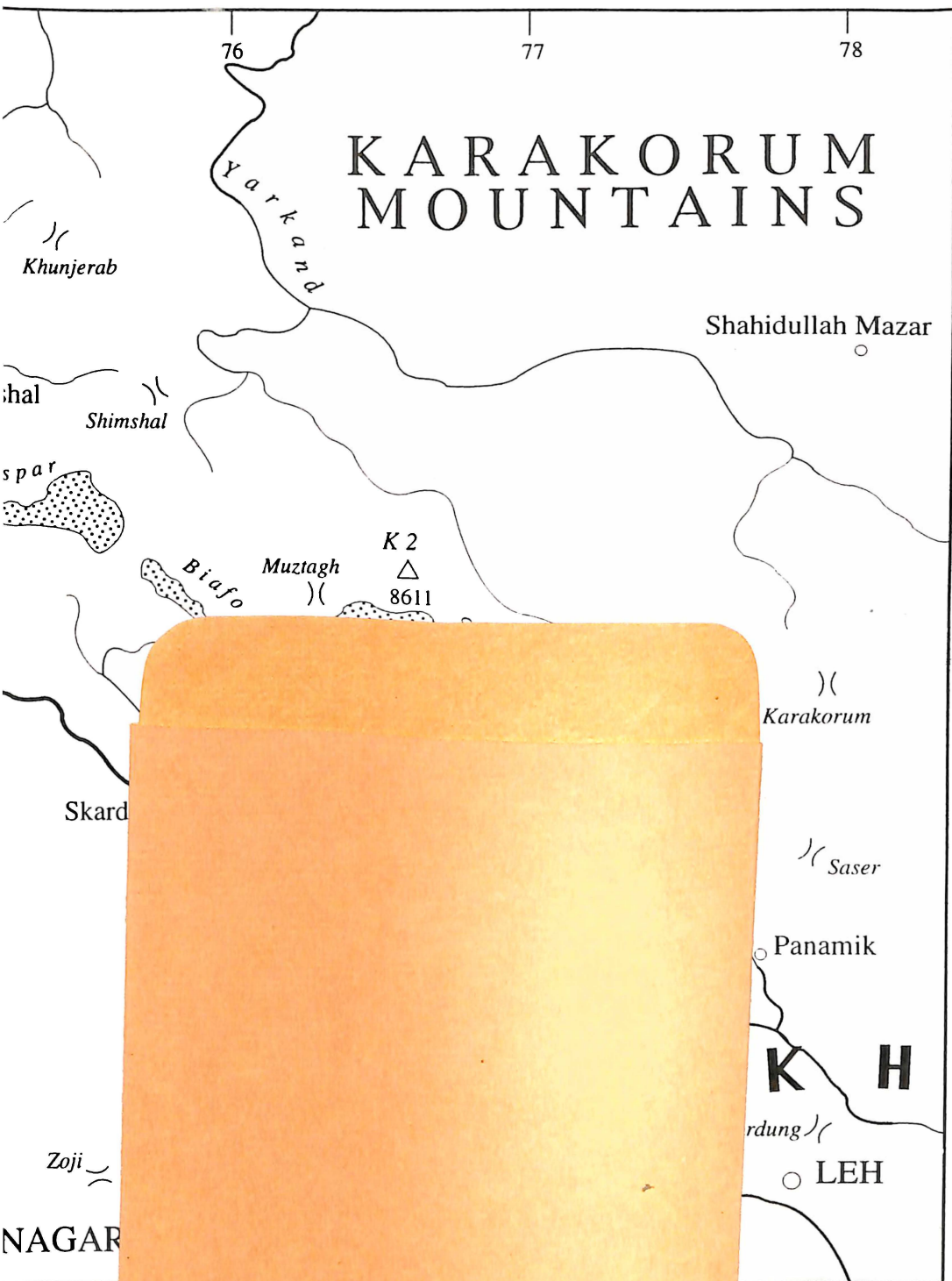
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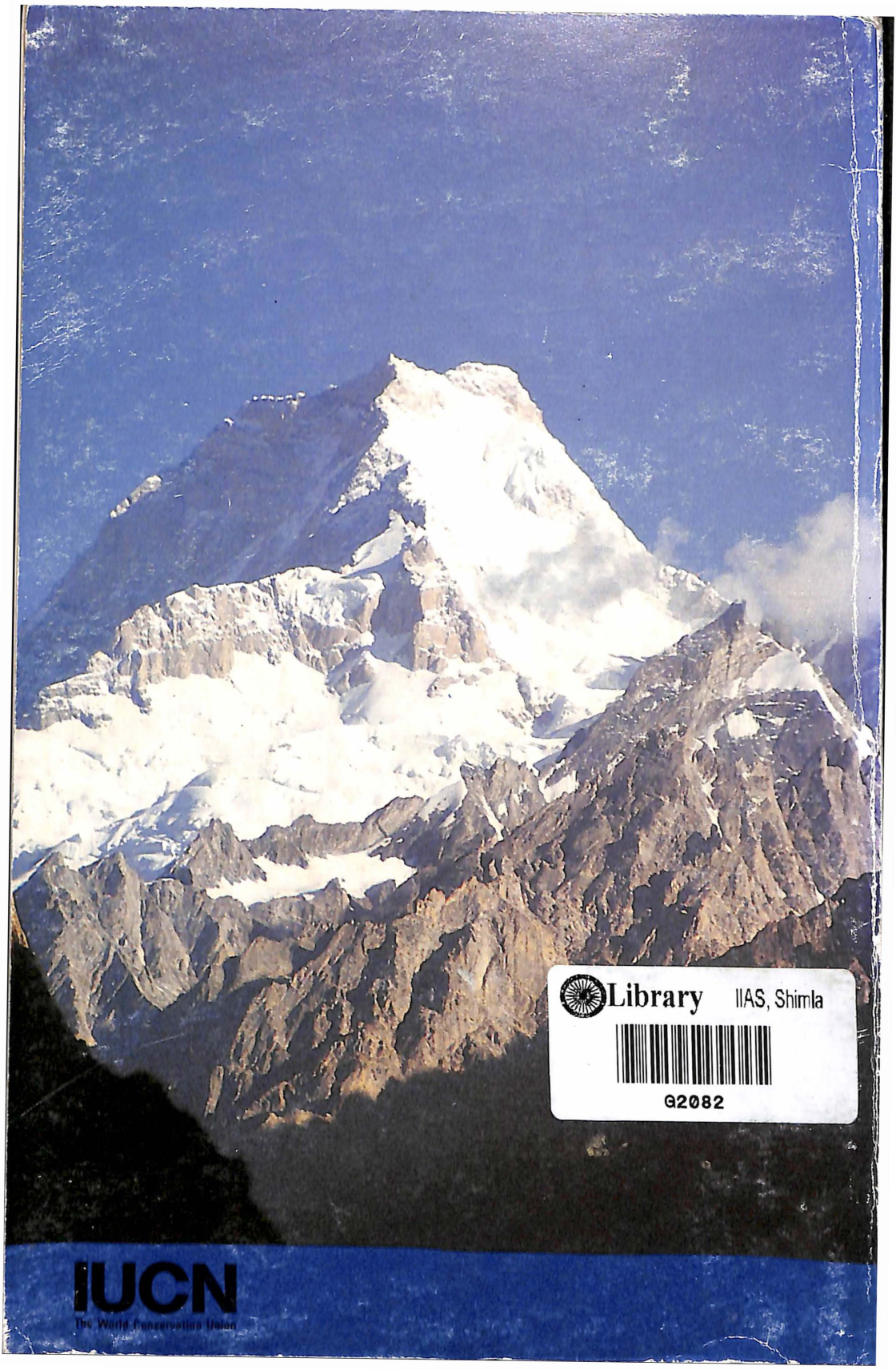
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