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Books

Die Anden. Geographische Erforschung und künstlerische Darstellung. 100 Jahre Andenexpedition von Hans Meyer und Rudolf Reschreiter 1903–2003

Edited by Heinz Peter Brogiato. Wissenschaftliche Alpenvereinshefte Vol 37. Munich, Germany: EOS Verlag, 2003. 243 pp., 32 color plates + CD ROM. €18.90. ISBN 3-928777-98-X, ISSN 0084-0912.

To celebrate the centennial of the 1903 expedition to the Ecuadorian Andes undertaken by mountaineer, explorer and scientist Hans Meyer and painter Rudolf Reschreiter, the Leibniz Institute for Regional Geography and the German and Austrian Alpine Clubs have published a splendid book that is also remarkable from a scholarly point of view. Meyer's and Reschreiter's expedition is not very well known internationally. Although Hans Meyer published scientific and artistic results of the expedition in a 522 page work entitled *In den Hochanden von Ecuador: Chimborazzo* (sic), *Cotopaxi etc. Reisen und Studien*, including a large "pictorial atlas" (the latter also in English in 1908), this new publication marks a milestone in Andean exploration, portraying important Andean scientists and artists.

The volume contains a collection of contributions by different authors on the following topics:

- The geographical exploration of South America as reflected in the documents of the Archive of the Leibniz Institute of Regional Geography.
- Early exploration of the mountains of Ecuador, and the mountain expeditions of Hans Meyer in 1903.
- Hans Meyer: publisher, researcher and geographer.
- Publications by and about Hans Meyer.
- The image of the Andes in art. Development of a landscape motif over 4 centuries.
- Rudolf Reschreiter: companion of Hans Meyer and painter on the Andean expedition of 1903.
- Hans Meyer's glaciological research seen from a contemporary perspective.
- Evaluation of Hans Meyer's scientific achievements in the high Andes of Ecuador and summary of geographical research results during the past 100 years.

A very valuable complementary source of information on this topic is the attached CD-ROM produced by Jordan, Cáceres, and Francon, and containing documentation about the 1903 expedition from Hans Meyer's travel diaries and photographs.

From an editorial point of view, this is a superb volume that successfully revives the tradition of scientific and artistic collaboration—which, in the Andes, dates back at least to the seminal work of Alexander von Humboldt and Aimé Bonpland. The extensive annex contains 32 color plates, most of them lithographs showing major Ecuadorian mountains and their glaciers. Among them, there is a reproduction of the 1807 copperplate engraving by von Humboldt and Bonpland on the "Geography of plants in the tropical countries," with its famous representation of the vertical zonation of vegetation on the Chimborazo volcano, and "Heart of the Andes" (1859), an oil painting by F.E. Church, which conveyed to the public in Europe and North America a highly romantic, albeit less realistic, image of the Andes.

However, the merits of this book go beyond the description of mountaineering experiences (the only summit reached on the 1903 expedition was, in fact, Cotopaxi), glaciological observations, and artistic portraits of Andean environments. A total of 107 black and white illustrations from various sources not only depict mountain landscapes but provide authentic insights into Latin American society and culture 100 years ago. Most interesting are the historical photographs documenting the construction and opening of the legendary Durán–Quito railroad (1903), as well as the town scenes of Quito, Guayaquil, Riobamba and Esmeraldas in Ecuador, and Bridgetown and Kingston in the West Indies.

This remarkable book on Andean mountains and cultural environments and the rich German tradition of Andean explorations is a superb repository of mountain research and art. It will be appreciated as a valuable source of information and a treasure of artistic mountain pictures by every Andean and high mountain aficionado. It deserves to be included in every academic library, despite the deplorable fact that no English summary and no English captions for illustrations have been included.

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Glacial Landsystems

Edited by David J.A. Evans. London, UK: Arnold, 2003. xi + 532 pp. £95.00 ISBN 0-340-80665-6.

Given increasing pressure on the limited physical resources within mountain environments from population growth, economic development and tourism, effective resource management requires detailed knowledge and understanding regarding the geomorphological processes that will have a major influence on development of these

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environments. In many high mountain areas, such processes are associated with the presence of glaciers.

The "landsystem" concept was originally developed to allow rapid evaluation and classification of recurrent patterns of landforms, soils and vegetation in Australia where common terrain characteristics could be identified and mapped over considerable areas (Mitchell 1973). Thus the concept was introduced far away from glacial landscapes and mountains, both of which have the ability to create complex terrain changes at much smaller spatial scales. The concept, however, offers an extremely useful approach within geomorphology, particularly in an applied sense where interest may be directed towards assessment of the superficial deposits by examining the landforms. It builds on the identification of individual landscape elements (landforms) and facets, composed of land elements (landform assemblages). These assemblages are then grouped into a landsystem, encapsulating the range of landforms within a process domain. In glacial geomorphology, this was first attempted by Fookes et al (1978) and Eyles (1983) who developed a simple classification into subglacial, supraglacial and glaciated valley landsystems which provides the base for the more extensive cover of the concept in this book.

Many landforms and sediment sequences are the result of processes that are no longer active but reflect the longevity of landscape elements within a timeframe of climate-driven geomorphological change. The landsystems concept is useful in determining characteristic landform–sediment associations that relate to both active and past geomorphological systems. It also emphasizes interactions between different processes and landform development.

This edited volume reflects the growth of information about glacial-influenced sediment sequences and depositional environments. However, mountains have a minor role in most of the 17 chapters, which focus on the complex sedimentological sequences and landform assemblages of the depositional zone in the lowlands beyond the mountain source areas. Given the overall aims of *Mountain Research and Development*, this review concentrates on the 5 chapters of relevance to mountain environments.

Apart from the introductory chapter on landsystems, the first chapter of interest is Chapter 11 on glacial surges. Although not specifically directed to mountains, this chapter is of relevance because this glaciological behavior operates in a number of mountain areas (Hewitt 2004). Much of the chapter presents detailed studies of Icelandic glaciers and the sediment–landform assemblages associated with historic surges. Little mention is made of other high mountain areas (eg Alaska, Karakoram Himalaya and Cordillera Blanca), with many surge glaciers that may be more of a hazard than the Icelandic examples. The chapter concludes that there are problems with identifying unequivocal landforms that can be related to surge activity. This makes the determination of a characteristic landsystem model somewhat problematic, though there is a useful summary diagram demonstrating the major sediment-landform sequences. My only problems with this latter part of the chapter are that the sequence of the figures seems somewhat out of order with the text, and that the final diagram does not relate to the conclusion.

The glaciated valley landsystem (Chapter 15) has a long established pedigree (Boulton and Eyles 1979; Eyles 1983). The earlier model provides a useful comparison for the review in this chapter which notes a wide range of geomorphological environments to be considered when dealing with the mountain glacial system and where non-glacial processes may be of equal or greater importance. The chapter emphasizes the development of sediment transport paths within valley glaciers as well as important interactions between glacial and glaciofluvial processes, which extend the areal extent of a glaciated valley landsystem beyond the ice margin. This chapter mainly considers landforms associated with glacial deposition, with many subdivisions describing different moraine ridges with little detailed information regarding the sedimentary record. This then leads into a short discussion on rock glaciers, illustrating the possible continuum between such landforms and debris-covered glaciers, but does not develop the periglacial model (Barsch 1996) which must also be discussed because rock glaciers occur in areas with minimal evidence of present or past glacier ice. Mention is also made of the presence of ice-dammed lakes and floods which are important aspects of system operation within such valleys, but without details. The final sections synthesize this information with respect to the most important controls that operate to determine landform assemblages and their variations in space and time.

Chapter 16 develops a theme which has been rather neglected in glacial geomorphology. Many mountain areas, particularly on passive tectonic margins, are characterized by plateaus. This chapter can be compared to the chapter on glaciated valley systems with a number of similar landform assemblages, particularly at lower elevation in the depositional zones. This chapter considers evidence from a number of contemporary icefields and relates this to formerly glaciated landscapes, demonstrating that glacier reconstructions in many mountain areas may need to consider the role of plateau in palaeoclimatic reconstructions.

The final chapter introduces an important theme associated with geomorphological readjustment to glacier retreat and the development of a paraglacial landsystem. Within mountain environments, the role of non-glacial geomorphological

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processes is often of greater current significance, given the current retreat of mountain glaciers from their Little Ice Age maxima (Beniston 2000). Much of this readjustment is associated with rock slope failures associated with reactions to stress field variations following the withdrawal of ice. However, changes can also be observed within valley fill aggradations associated with extended glacier extent, as the drift mantled slopes are altered by slope failure and fluvial-related processes. This is a conceptual chapter outlining the overall principles that determine a range of geomorphological systems that can be contained within a paraglacial landsystem title.

The information in these chapters demonstrates the wide range of geomorphic systems that can be investigated within the landsystem concept. Many of the proposed landsystem models within each chapter are best regarded as first approximations towards linking sediments to landform assemblages, above all in mountain environments where research into the geomorphological evolution in many areas is incomplete, particularly regarding a temporal sequence of glacier-directed events. The book illustrates the potential of the landsystems concept with respect to the orientation of future research into mountain geomorphological systems, and provides a sound basis for improvement associated with sustainable development and management of such sensitive earth systems. While the high price may detract from its purchase in many developing countries, a paperback edition is scheduled for publication in January 2005 and will allow the book to become available to a wider audience.

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Medical Pluralism in the Andes

Edited by Joan D. Koss-Chioino, Thomas Leatherman, and Christine Greenway. London and New York: Routledge, 2003. xix + 256 pp. £25. ISBN 0-415-29920-9.

This edited volume takes the reader into the field of medical anthropology, specifically exploring the topic of medical pluralism as it relates to specific cases throughout the Andes of Ecuador, Peru and Bolivia. Like the study of religious syncretism, in which practices, beliefs and symbols from at least two traditions are blended into a "new" local religious system, the study of medical pluralism focuses on how practitioners—in this case healers, patients, and family members—use techniques and beliefs from biomedicine and local healing systems to effect cures and find meaning in their treatments.

In the detailed ethnographic case studies outlined in this illuminating book we find that not only do Andean people combine biomedical and Andean medical beliefs and practices, but that techniques from acupuncture and homeopathy, spiritism, and commercial natural medicine may also be employed, leading to a potentially vast array of possibilities for a particular patient. The cases examined range from those set in rural and relatively isolated areas to those in urban settings (such as Quito, Ecuador), allowing for consideration of particular brands of medical pluralism, various health issues (eg reproduction, culture-bound illnesses, diet, shamanism, bone-setting, Chagas disease) and of the ways in which medical pluralism is mobilized to access power and resources and to signify aspects of cultural identity.

Though this book will be of particular use and interest to specialists, I found that its appeal came from the beautifully detailed case studies which, taken together, provide a picture of the diversity of Andean cultural practices as well as some of the similarities found throughout this region. For instance, some of the same culture-bound illnesses as well as biomedical ailments are found throughout the Andes, but the ways in which they are dealt with and the meanings attached to them can vary based on the particular ecology and local cultural context.

The great strength of the book, rare in an edited volume, is the coherence at the heart of these collected essays. Many of the chapters were first presented as papers at a symposium at the American Anthropological Association that was organized as a tribute to the work of Libbet Crandon-Malamud, whose 1991 book, *From the Fat of Our Souls,* was an exploration of medical pluralism as it related to themes of ethnic/class identity and power. In the present volume, Hans Baer aptly notes that Crandon-Malamud's work was a pioneering contribution to the area of "critical medical anthropology," a field that explores health issues as they relate to the broader context of economy and politics in which people's lives are embedded. The volume's contributors illustrate this approach from a variety of perspectives and topics. One chapter is material from Crandon-Malamud's book, providing a case study that explores the illnesses and health choices of two mestizo sisters from her Bolivian field site of Kachitu. Crandon-Malamud's chap-

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ter is preceded by an essay by Joan Koss-Chioino, "Ethnography and the Person," which helps shed contemporary anthropological light on the topic by reflecting on Crandon-Malamud's social and political position amongst the people she studied, and contributing insights from Koss-Chioino's own visit to Kachitu.

All of the remaining chapters (there are 13 separate chapters overall, organized into 4 parts, and ordered in a natural flow) comment on and expand Crandon-Malamud's basic thesis that medicine is a resource in medical pluralistic environments through which people express and negotiate their identities and attempt to position themselves in advantageous ways. Not all of the authors come to the same conclusions from their fieldwork—for instance, in her study of bonesetters (*componedores*) in northern Peru, Kathryn Oths finds that, due to the lack of social differentiation in the hamlet she studied, medical choice is not a way for people to negotiate identity, and instead their choice of treatment is based on efficacy. Nonetheless, like the other contributors, Oths finds Crandon-Malamud's approach to be useful and testable.

Expanding on Crandon-Malamud's thesis, several contributors—Anne Larme and Thomas Leatherman, Laurie Price, Bonnie Glass-Coffin—examine gender as another form of identity that can be negotiated through medical treatments and choice, a variable that Crandon-Malamud did not examine directly. Focusing on the community, the family, and the individual, respectively, these 3 chapters demonstrate how gender, illness, and treatment choice are interrelated within the broad rubric of medical pluralism. For example, Larme and Leatherman provide comparative data from Cuyo Cuyo and Nuñoa on women's work, reproduction and illness, to show that *sobreparto* ("illness following childbirth") provides women with a small degree of power in dealing with the multiple burdens of work that they shoulder. In their essay, they address the question of why *sobreparto* exists, analyzing the conditions under which it is a ubiquitous illness rather than merely describing its causes and symptoms. In this endeavor, they parallel Crandon-Malamud's 1983 essay on "Why susto?", which attacked similar issues.

Using Crandon-Malamud's study as a leitmotif, the contents of this volume depart from it to range across many other important themes in Andean anthropology, including the importance of reciprocal relationships, how altitudinal variation ("verticality") conditions life, agrarian reform, modernization, the variety of traditional healers (including shamans), the rural–urban interface, the dangers of "fat-suckers," agriculture and food. Many of the chapters also begin with a short vignette, describing the author's arrival in the field area, or his or her introduction to a particular aspect of Andean illness and health care. These opening stories give us a feel for the precipitous lay of the land, the people who live there, and the connection that fieldworkers have to their field areas. These "snapshots" inject the text with emotion and give the reader a sense of place(s) unique to the Andes.

Given the book's inclusion of multifaceted data on the Andes, the text's breadth, and the clear and engaging style in which the essays are written (and reflect on each other), this text makes good reading for graduate students and undergraduate students alike in anthropology. This text would provide an excellent course reading in medical anthropology, but also for Andean or Latin American studies. It also has a valuable role to play in the literature of comparative mountain research.

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Sustainable Development in Rural China: Farmer Innovation and Self-Organisation in Marginal Areas

By Bin Wu. London, UK: Routledge, 2003. 182 pp. £60. ISBN 0-415-29719-2.

China's Poor Regions: Rural–Urban Migration, Poverty, Economic Reform and Urbanisation

By Mei Zhang. London, UK: Routledge, 2003. 202 pp. £65. ISBN 0-415-32145-X.

These two relatively short books both tell stories of human adaptation in marginal mountainous areas of China, dealing with aspects of community vulnerability and resilience by examining specific household mitigation and coping strategies to these marginal conditions. Wu looks at the role of the farmer in promoting sustainable development in rural villages of Shaanxi through innovation and self-organization. Zhang investigates informal processes of rural–urban internal migration and poverty in both sending and receiving areas in Shanxi, including the Taihong Mountains, Luleng Mountains and the Datong-Yanbei area.

Both authors emphasize non-official or informal responses to the increasingly harsh economic conditions found in Shaanxi and Shanxi, where regional differences and inequality erode government poverty reduction efforts and exacerbate ecological and environmental crisis. A core theme running through each text is the imbalance in the access to resources between regions, between villages and between families. Wu's book connects well to Zhang's book, which essentially shows what happens when farming

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systems and rural livelihoods become unsustainable. Both authors use modernization theory and ideas about social transformation to support their arguments.

Both authors adopt a case study approach incorporating self-administered structured questionnaires. Zhang followed up her questionnaire survey with in-depth semi-structured interviews of migrants and nonmigrants during fieldwork from October 1997 to July 1998. She states that this is the first time in China a two-ended survey approach was used in both the sending and receiving areas on migrants and their families (p 158). Her questionnaire templates and structured guidance for interview questions are usefully displayed in the appendices. This refreshingly open description of methodology allowing for replication and testing is in marked contrast to Wu's more traditional concealed methodology! He adopts a somewhat imbalanced sampling regime, with 22 valley villages, 64 middle villages and 63 remote villages sampled; this means that comparisons between plain and mountain are dangerous. He uses a predominantly quantitative approach, but suggests the need for future qualitative research to explore further the meanings behind individual decision-making. Wu also recognizes the fact that technology diffusion in marginal areas is not always determined by the factor of physical distance, but sometimes by social distance.

I have concerns that the literature reviews presented by the two authors are somewhat dated, with the latest references from the mid 1990s, but the majority from the 1970s and 1980s. Having said this, both books provide useful insights into relatively recent (although not always up to date) changes in Chinese society like changes to the Hukuo system (1958), that allowed people for the first time to register their household at the point of destination, rather than just in the rural sending area (a reform that had restricted success according to Chan 2003); the introduction of the production responsibility system (late 1970s), that increased labor efficiency, resulting in surplus labor in rural areas and unemployment; rural reform (mid 1980s), that encouraged people to leave agriculture and participate in rural enterprises, and often to leave the land but not necessarily the village; and the issuing of residential ID cards (1985) to all citizens over 16, that increased spatial mobility.

Both books have a number of small problems with typographical and grammatical errors. Zhang is much more confident in her use of English than Wu, who also has a tendency to use too many acronyms which, at times, leads to a confusing read. Occasional inconsistencies creep through in the figures and tables used by both authors and each unwisely at times makes comparisons between unequal periods of time. Zhang occasionally slips towards the use of condescending and derisory terms like "backward" to describe the countryside and the traditional agricultural economy (p 64, p 124). All such language does is keep the myth going! I also hold some concerns about Zhang's use of emotive terms like "brave" in results. Such terms require very clear conceptual development and definition if they are to avoid ambiguity. Likewise, Wu's broad categories in some tables are also rather ambiguous.

Of greater concern is that each author lays claims to their work having wider relevance and applicability than their study areas. Zhang argues that Shanxi represents a typical province in central China, yet this is not the case because of the large coal deposits and the slightly higher (although still below the national average) rural household net income per capita in this province compared to other marginalized parts of China. Wu's claims are more grandiose, saying that his book is representative of farmers' experiences of agricultural development throughout the whole of marginal mainland China, yet it draws only on examples from primary research conducted in Shaanxi villages found on the Loess plateaus. This ignores the massive micro-environmental variation found throughout China and the fact that in more peripheral parts of the country, such as Xin Chiang and Yunnan, issues of ethnicity complicate the overall development picture and leave minority communities particularly vulnerable to poverty.

Another small criticism is that Wu and Zhang are in danger of not fully acknowledging the grand sweep of Chinese history. Wu's use of the word "past" to only describe the Green revolution up to the present does not embrace the true historical footprint of many of his field locations. Were terracing and irrigation really only first introduced in the 1950s, and do innovation strategies only appear since the introduction of agricultural extension? Zhang, on the other hand, fails to acknowledge the many cycles of internal migration in China throughout history in response to political vacillation and warfare, whilst also only affording a cursory glance at famine migration and recruited labor migration. In a similar vein, both authors ignore politically sensitive discussions about assimilation and subjugation and fail to comment on the central government's pursuit of a development strategy in western China (Shen 2002).

Surprisingly, both books have an economic focus. I expected this when reading Zhang's book, but was a little surprised to find Wu adopting this approach when dealing with farmer innovation. Wu argues that households with more resources from exogenous sources demonstrate more innovation and that innovation declines with remoteness and inaccessibility.

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Surely there is also an endogenous or organic input to innovation? Still, I cannot argue with Wu's conclusion that rural appraisal must account for microvariations in livelihood opportunities and strategies, and that more central and provincial funds should be redirected to remote rather than middle rural areas. I also agree that the underresourcing of indigenous talent and intrinsic potential is a serious issue impeding rural innovation in marginal areas. With this in mind, Chapter 7 of Wu's book is important, as it touches on how social capital is accumulated or created for the purpose of farmer innovation and self-organization, leading to a farmer innovation system and self-organization model.

At times, Zhang seems judgmental about nonmigrants, viewing them as non-opportunists, although she redeems herself in a small section on social differentiation. Her work highlights the fact that expectations of the migrants are often greater than the reality—yet the book appears optimistic of the growing trend towards internal migration. Perhaps her poor interpretation of the differential between rural and urban incomes has led to this view? Does the future of China depend on getting more people out of the countryside and into big cities like Beijing and Shanghai, to increase farmers' incomes? The issue of food supply and the changing dependency relations between contiguous rural and urban areas, particularly in the relatively small non-littoral cities of China, is perhaps underplayed by both authors. As Zhang says, with China joining the WTO, at least 20 million jobs in agriculture in grain/cotton and oil production areas may well be lost. Farmers who remain in rural areas are often encouraged to reduce the quantity and increase the quality of produce to increase profit: a situation that leaves inland cities, in particular, with a traditional dependency towards being supplied by locally produced foodstuffs, with less food to distribute to the urban population.

Thus, is China right to shift its emphasis from quantity to quality agricultural produce with such a large population and rising unemployment? Will this situation lead to social instability? Wu may argue that, in the countryside, there is at least propensity for farmer innovation amongst those that stay, given the right preconditions and support networks for agricultural production to increase. But as he also says, to break the cyclic nature of grandiose gesture, China must first separate innovative leaders from administrative leaders to make this happen. Is China ready for this?

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CD-ROM

Watersheds of the World_CD

CD-ROM. Washington, DC: World Resources Institute, 2003.
US$125. ISBN: 1-56973-548-8.

When I agreed to review this CD, I was not sure what to expect, with its scope being so potentially vast. On opening the package, I was not much wiser: the CD was attractively presented, with an abstract photo and a selection of logos and credits on the sleeve, but, frustratingly, it did not tell me what the CD actually contained. When I inserted the disk into the computer, the application started automatically, and my initial frustration was quelled by the "Welcome Page" introduction:

> *This CD provides maps of land cover, population density and biodiversity for 154 basins and sub-basins around the world. It lists indicators and variables for each of these basins and, where appropriate, provides links and references to relevant information. It further contains 20 global maps portraying relevant water resources issues.*

The Welcome Page additionally provides 5 selections: the first, to enter the "Watersheds of the World_CD" application proper; then, further options to download the information as PDF files, read some Technical Notes, advise of copyright, and, finally, further detail on the background of the CD. The latter reveals that the CD is the first product of the Water Resources eAtlas Project—a collaboration between The World Conservation Union (IUCN), the International Water Management Institute (IWMI), the World Resources Institute (WRI) and the Ramsar Convention on Wetlands, who are the joint publishers of the CD.

The "Watersheds of the World_CD" selection leads you to a map of the world, from which any of the 5 continents can be selected by a simple point and click. Not so obvious are the selection menus, hidden behind 5 hollow squares at the top of the page, giving options to "select basin by name" or "select by map" for each continent. I continued with the map-based point-and-click approach. Understandably, only the larger basins are included in the software, and, as the cursor is moved over an outline map of the basins, the relevant basin number and name are shown.

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In this manner, I selected an individual basin from a continent. A report is then shown, comprising: a land cover map (9 types); a summary table of land cover and land use; a population density map (6 classes); a basin "indicators" table, including details of basin area, average population density, water supply per person, and the number of dams; a map of Ramsar sites (4 categories of site); and, finally, a biodiversity indicators table, showing information on the number of fish and amphibian species in the basin. An option is available to download a PDF version of the report. Disappointingly, the basin report does not disclose any information on the source of the data. Neither does it instruct the user to refer to the "Technical Notes," which can be navigated to from the initial Welcome Page. It would have been much better if the relevant technical note were immediately available using a hyperlink. Sub-basin data (for only some of the basins) are similarly presented via the "select basin by name" menu.

The "Technical Notes," which attempt to describe the derivation of the maps and tables of the basin reports, are shown in one long page of text, arranged in 4 sections. In this way, it is difficult to discern how any single item in the basin report may have been derived. Details of several references are embedded entirely within the text; some references appear incomplete (eg Billington et al 1996), while other references are made but no details given (eg Fekete et al 1999). All references should have been listed separately at the end of the relevant section, and the whole CD would have benefited from a separate section providing a complete bibliography. I felt there was a distinct lack of rigor and consistency in how these "Technical Notes" had been prepared.

Twenty "Global Maps" are also shown in the software. Here, technical notes and references follow each map directly—a big improvement, but why the inconsistency? The maps provide summary information for each selected basin: from descriptions of biodiversity by basin to those of land cover, population density and degree of river fragmentation. Again, the references could have been dealt with better: several references made in the text (eg Stattersfield et al 1998, in "Endemic Bird Areas by Basin") only appeared as part of other entries (eg Revenga et al 1998) in the subsequent reference lists. This section would also have been better if the maps were grouped logically by theme (eg biodiversity, land cover, water use).

How useful is the "Watersheds of the World_CD" to those involved in mountain research? The authors claim it to be a "system that allows stakeholders to retrieve, consult and analyze information regarding water resources and freshwater biodiversity," but I feel the spatial resolution of the basin maps and the broad classification of the displayed data would limit their application. Certainly, more subject matter could have been presented in order to make the CD a more comprehensive description of the watersheds of the world. For instance, the CD lacks a hydrometeorological description of the watersheds: maps of long-term average annual, seasonal or monthly precipitation and/or temperature could have been presented, while long-term monthly hydrographs at selected gauging stations could have illustrated the different river flow regimes within basins. Topographical maps showing elevation and relief would have been interesting, as would have been those on the distribution of soils and geology. However, my biggest concern regards the practicality of using the information presented. Rather than embedding the maps in PDF documents, it would have been much better to make them available in a more useable format, such as ArcView shape files, to enable the user to retrieve and analyze the data more accurately. Presented in this form, and given that much of the data presented (and more) can be readily obtained free-of-charge and in greater detail over the internet, I doubt that I would invest US$125 to purchase this CD. But do not let my opinion prejudice your decision: if interested, a version of it can be seen at www.iucn.org/themes/wani/eatlas/index.html.

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