women's marginalization is, ironically, built into the very processes of development that seek to integrate them and their societies into wider national identities, overlooks vital dimensions. It does a disservice to current complexities of local–global articulations. Areas of particular importance to be tackled in the future should include the implications of national, ethnic, and interregional armed conflict on communities and women's health. The intersection of poverty and women's low status links with health issues in particularly dramatic ways, such as domestic violence, alcoholism, sex trafficking, and the spread of HIV/AIDS.

Overall, however, this is a commendable study. In raising more questions than it answers, it is likely to inspire further in-depth regional- and national-level comparative work on gender. Comprehensive and collaborative research methodologies feed into action agendas, and next year's global focus on mountain areas will, it is hoped, offset years of neglect and at last help integrate gender analysis into mainstream perspectives of mountain development.

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The Patagonian Huemul: A Mysterious Deer on the Brink of Extinction

By N. I. Diaz and J. Smith-Flueck. L.O.L.A. (Literature of Latin America) Monograph No. 3, Buenos Aires, 2000, xviii + 150 pp. US$ 30. ISBN 950-9725-39-0.

In general, deer are a fairly successful group of mammals. They are widespread in most continents, and populations can increase quickly in suitable habitats if they are given enough protection. The huemul is one of several rare species attracting increasing attention from conservationists. It is being affected by a combination of human activities for reasons that are not all well understood and which are creating some complex conservation problems.

The huemul (*Hippocamelus bisulcus*) is a medium-sized deer, now mainly restricted to Southern beech (*Nothofagus* sp) woodlands in the Andes of Chile and Argentina. It is a poorly known species, little studied by the scientific community and virtually unheard of by the general public. It has declined substantially since Europeans settled in the region and appears to be still declining today. Accounts by the first explorers and settlers indicate that the huemul was formerly widely distributed throughout Patagonia, occurring in large herds in the pampa and foothills, where today they are either rarely or never seen. In the few localities where populations have been estimated, densities are only 0.02–5.6/km^2, a range that is an order of magnitude lower than deer populations in northern temperate regions. Estimates for the total number of huemul have been put at 1000–2000. What has brought the huemul to this point, and what can be done to protect them for the future?

To help answer these questions, the authors have compiled a review of both historical and scientific information about the huemul. In view of the lack of scientific information about the species, they have made full use of anecdotal accounts made by explorers and early settlers as well as their own observations and have sought to clarify these by drawing on knowledge of the ecology of related species. The book includes sections on the history and current status of huemul, their general biology and life history, taxonomy, social behavior, and habitat use. It includes many figures and good-quality color photographs. It ends, appropriately, with a section on threats and conservation needs.

As with many rare species, there appear to be a number of factors contributing to the decline of huemul. Unfortunately, direct evidence of the relative significance of each of these factors is still lacking. Hunting was clearly important during the settlement period and is still known to occur, but with better protection is now less serious. Huemul also avoid areas grazed by livestock, even those that offer otherwise suitable habitat. The reasons for this are unclear, although it could be due to their susceptibility to livestock diseases or to avoid harassment from dogs. An additional puzzle is a low but variable recruitment rate. Observations of huemul in late winter often reveal that the majority of adult females have no surviving fawns, in spite of the fact that they usually appear in good condition.

An issue that is now of increasing concern is the expanding population of red deer, which have become established in the wild following escapes from deer farms. Red deer have a similar diet to huemul and are not subject to any control or management. At present, there is very little overlap in range with huemul, but the potential effects of competition, disease transmission, or behavioral interference are not known. Answers to such questions are needed to help guide conservation efforts for huemul. Unfortunately, investigations on such rare and inaccessible animals provide few observations, making it difficult to obtain enough ecological information to guide conservation efforts. Improved methods of monitoring huemul populations are urgently needed to enable managers to determine trends quickly, as are reliable capture methods, for both research and captive breeding.

The book is a useful source of information on the current plight of the huemul and is definitely recommended for those involved with conservation in the region or of huemul in particular. It deserves to

be read more widely, for example, by others involved in conservation policy or in research on endangered mammals. Hopefully, this will attract more interest in this little known species and ensure it does not become one of the few deer species to go extinct.

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African Mountain Development in a Changing World

Edited by Hans Hurni and Joselyne Ramamonjisoa. African Mountains Association (AMA) and Geographica Bernensia, Antananarivo and Berne, 1999. xi + 332 pp. US$ 15.00. ISBN 3-906151-33-6.

African mountain areas rarely receive the attention offered regions such as the Himalaya or Alps, although 45% of the continent has slopes greater than 8% and some 3 million km^2 lie above 2000 m. The mountain zones are often the most productive, having a better combination of soils and rainfall than many lowland regions. About 100 million people are thought to live in these areas. However, of greater economic and political importance today is the fact that the highlands are vital sources of water, timber, and minerals for the economic development of the lowlands. The lowlands have become the focus of most development initiatives, leading to tensions between highlands and lowlands in some areas. In Africa, as elsewhere, many highlands are also border zones (eg, in Burundi) and remain areas of political unrest.

This book is the proceedings of a workshop organized by the African Mountains Association (AMA) and the African Highlands Initiative (a program within the International Centre for Research on Agroforestry, ICRAF) in Madagascar in 1997. The workshop was the fourth of a series that began in 1986 in Ethiopia and met subsequently in Morocco (1990) and Nairobi (1993). During this period, the international framework for mountain research and policy changed dramatically. First was the adoption of Chapter 13 on mountains as part of Agenda 21 at the Rio conference in 1992. This was followed by FAO's designation as Task Manager for Chapter 13 in 1994 and the inauguration of the Mountain Forum in 1995.

The papers in this book represent some of the work carried out in Africa during this exciting period. Of the 18 main papers, 12 are in English and 6 are in French; all have appropriate French or English summaries. The editors point out that they represent just part of the research currently under way in Africa, concentrating on Eastern Africa and especially Madagascar. The range of topics includes soil and water management, biodiversity, and farming systems.

Research on soil and water conservation provides a focus for 7 chapters, ranging from studies of soil analysis through GIS in Kenya to a discussion of the World Overview of Conservation Approaches and Technology (WOCAT) strategy for decision support and management for soils and water. The GIS analysis by Mati et al, for example, was used to explore relationships between key soil variables and water availability and their susceptibility to erosion in the Upper Ewaso Ng'iro. This is part of the largest basin in Kenya, and the analysis clearly highlights how the best soils were found on the mountain slopes that were also susceptible to erosion. Another study in this basin assessed the utility of streamflow modeling, with particular reference to developing an understanding of the flow patterns between highlands and lowlands in a situation where much of the new investment and water demand is in lowland areas. A particularly interesting point regarding the improvement in accuracy was that, despite instrumentation, it was the local knowledge of staff that really counted in making sensible judgments about the validity of flow data.

From a more traditional perspective, Léa et al explore the link between the local geology, erosion processes, and climate in an intensive rice production zone in Madagascar, leading to a strong call for policies to prevent erosion, especially through detailed land-use planning to avoid zones of particular sensitivity. Finally, in this group, work on alpine wetlands in Lesotho by Grab and Morris highlights problems arising from the commercial exploitation of water in the Highlands Water Project. Road construction plays an important role in removing the turf cover, and local climate change may alter the nature of alpine degradation. These factors, in addition to the more commonly documented grazing problems, need to be taken into account when discussing the dynamics of highland wetlands in Lesotho.

Another group of papers focuses on biodiversity conservation, particularly problems associated with deforestation. Most of the papers reflect the concern in Madagascar resulting from the clearance of highland tree cover for agriculture. A study using satellite images in the Manongarivo Massif (Gautier et al) indicates that clearance has taken place despite the area being part of a protected zone. Once again, the principal contributor is the pressure for rice production, reflecting increased population. Similarly, Ralaiarivony argues that conservation policies are needed to preserve biodiversity but that simple 'top down' policies will not work. The economic pressures to maintain livelihoods are far too strong. He reports on a project that tries a more participatory approach and

income opportunities may lead to altered use of summer settlements. When motorable tracks improve accessibility, use of such areas is intensified.

- Large households are generally able to compensate for the absent labor force. In smaller households, women frequently have to replace absent laborers and carry out work that is usually done by males. This may lead to a bad reputation for the particular household and to a higher workload for women, although religious leaders define which kind of work can be carried out by women. Share-tending, again a communal and cooperative strategy, is increasing, especially among smaller households.
- Socioeconomic differentiation between and within villages increases in these transformation processes. The transition particularly favors men, who actively utilize the opportunities of education and employment. Women are still confined to their homesteads and villages. Often they have to face increased workloads. Wealthier families with regular off-farm income have the opportunity to delegate tasks to relatives, shareholders, and tenants, thus transforming social structures.

Though an outsider's perspective, this compendium contributes to understanding of the enormous and rapid change in living conditions in Northern Pakistan. The research highlights particular adaptive strategies and options for sustainable livelihoods that do not drain the natural resource pool. The common perspective and conceptual framework for the extended field research allow consistent and coherent conclusions. These are a challenge in the debate on the potential for sustainable development by and among local societies and people. The authors also call upon Pakistani researchers to supplement the picture with their perception and views. It is to be hoped that an internationally recognized editor would help make Pakistani views known to a larger community.

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