



Climbers approaching the summit of Chopicalqui, Huascarán National Park. Rodney Garrard

VIEW FROM THE ANDES

Listening to the mountains in Huascarán National Park, Cordillera Blanca, Peru

by RODNEY GARRARD

The livelihoods of many Peruvians depend on the Cordillera Blanca, which is a source of subsistence and a basis for production. The mountain range runs along the line of a volcanic fissure situated 300 kilometres north of Lima in the Ancash Province, in central northern Peru (see fig. 1). The Cordillera Blanca is the largest tropical high mountain range in the world, with over 30 peaks that rise above 5700 metres, holding 25 per cent of all the world's tropical glaciers. The Inca sovereigns knew their value; they cultivated water distribution networks from Cordillera Blanca, and they revered the mountain deities, making yearly pilgrimages to the glacierised peaks. Such reverence still exists among local residents, though today this reverence no longer involves sacrificing youths and maidens to appease the wrath of the mountain spirits. The

Cordillera Blanca has been strongly affected by natural disasters throughout the period of human habitation in this region. In fact, some of the greatest glacial catastrophes ever documented have roared down the Santa Valley in the twentieth century. Such events are etched in the collective memories of the local residents.

In 1975 the Huascarán National Park (HNP)¹ was established. It covered the whole of the Cordillera Blanca above 4000 metres (3400km²).² The park is strictly protected, the equivalent of category II in the International Union for Conservation of Nature's (IUCN) definitions of protected areas.³ The main goals of the park are conservation, sustainable development, and

¹ HNP will be referred to throughout this article by this acronym or as 'the Park'.

² The park is 5710 km², including the buffer zone.

³ HNP was declared a UNESCO Biosphere Reserve in 1977, and a World Natural Heritage Site in 1985.

combating the negative effects of mining and tourism. Currently, there is widespread recognition among scientists and conservation organisations of environmental change in the park. The most dramatic environmental change so far has been the melting of the park's glaciers caused by warming trends of the past century, particularly during the past 30 years. The retreat of the park's glaciers provides eminently useful information for the current discussion of climate change. Sadly, it has become clear that many of these glaciers that had seemed permanent features of the landscape for millennia will not survive for many more decades. Other key environmental issues facing the park include the loss of critical vegetative coverage, overgrazing of alpine and subalpine pastures, concentrated tourism, government policies supportive of resource extraction within the park, and

subsequent external pressures such as new roads, mining and hydropower projects (AC Byers, 2009; Byers, personal communication).

Marcos Zapata, who heads the Glaciological Unit of Peru's National Water Authority, claims that the Cordillera Blanca has lost 27 per cent of its glacier coverage since 1970 (187 km²), and that 11 per cent of this loss occurred between 1997 and 2003 (Zapata, personal communication). These trends are very real to the residents living in the regions that surround the park. As Jeffery Bury, an assistant professor of environmental studies at University College Santa Cruz, outlines, 'most of these people have lived beneath these glaciers their entire lives, they can point to where the glacier was when they were children, and now the ice is disappearing' (Bury, personal communication). Unfortunately, these residents have the distinction of being at the forefront of climate change impacts, which might be termed a narrative of victimhood i.e., the people directly affected by glacier retreat passively suffer the consequences of others. They make a very small direct contribution to worldwide emissions of greenhouse gases that are the root cause of climate change, and they are the furthest removed from the decision-making process (WN Adger et al. 2001). Lonnie G Thomson, professor of geography at the School of Earth Sciences at Ohio State University, has been documenting glacial recession in the Central Andes since the late 1980s. He says that the situation in HNP today 'is very alarming' (Thomson, personal communication). For residents below the park and those in more distant lowland areas this means less water for consumption (water in the dry season comes almost exclusively from glaciers), livestock, and sanitation. As Bury outlines, local residents are already being forced to adapt: 'They have enough to drink, but it's affecting agriculture, grazing, lake levels, and fish in the river. They're concerned' (Bury, personal communication).

The impacts that we observe in the HNP are neither a local Peruvian phenomenon

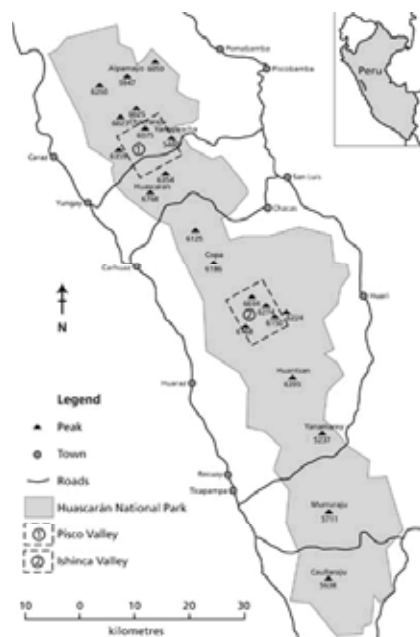


Fig 1. Huascarán National Park, Peru, highlighting the park boundary and the locations of Huaraz, Ishinca and Pisco Valleys.

Courtesy of Alton Byers

nor restricted to developing countries: they are global problems that raise the question of whether more effective protection of mountain regions in general is necessary on a global scale. However, to achieve effective conservation and sustainable development in mountain protected areas, the overall social, economic, and environmental benefits of any intervention need to be maximised and the costs minimised. These efforts will also need to be based on participatory processes with local residents, or they will be doomed to failure. To date, the communities surrounding HNP have been comparatively neglected in the national development agenda, with no consideration of the growing risks and increased vulnerability to the impacts of climate change. Aritza Monasterio Bilbao, mountain guide and director of Andinista Adventures, based in Huaraz, outlines, 'residents surrounding the park think this area [HNP] is simply an idea from wealthy countries' (Bilbao, personal communication)—meaning the park is basically a playground for foreigners (like

myself). 'They resent the status of the park,' he continues, 'and are often opposed to the [parks] regulations'. Given that 226,000 residents live in the park's buffer zone, this is a concern.

In Huaraz (see fig. 1), the city that provides most of the tourism infrastructure for HNP, residents value the park as a means of gaining income from tourists, and many want to see the park developed as they are in the US, with shopping arcades, ski lifts, cafes, and luxury hotels—often referred as the 'Yosemite model' of protected areas. There is also a group of protectionists (who are often removed from the park's resources all year round). They see the park's main purpose as conserving biodiversity and natural resources, and protecting the park from more mining and hydroelectric projects. Of course the viewpoints are more diverse than I have outlined here, but my point is that the residents in the near vicinity of HNP have competing wants, some of these wants are controversial, and many are at odds with the park's conservational and sustainable development realities. We must also take into consideration Peru's recent transformation into a neoliberal, mineral-based, export-oriented country, and the fact that its political institutions are aligned with this new ideology.

The Cordillera Blanca has long been blessed and cursed with water resources. On the one hand, the massive glaciers and multitude of glacial lakes represent a major resource for clean water as well as tourism and hydroelectric power generation; and on the other hand, climate change is altering the rhythm and amount of available water and causing new natural hazards. On our current path of climate change thinking, it seems as though park authorities cannot do much about the region's tropical glaciers (any direct localised mitigation effort is only going to be short-term).⁴ What the park authorities can do is buffer the impacts of climate change by restoring

⁴ In the summer of 2005, the Swiss ski resort of Andermatt covered a small portion of a glacier, less than a hectare, with a reflective blanket to slow its melting



ABOVE *HNP's toilets—an expensive (and ineffective) overkill.*

RIGHT *Quenal forests having been eaten by cattle.*

Both photos: Rodney Garrard



and protecting the forest, grassland and alpine ecosystems in the upper reaches of the park. For example, the park's remaining quenal forests (a *Polylepis* species, see photo this page) cover a remnant of their former range, most likely because of accelerated cutting since colonial times (Byers, personal communication). The restoration of these quenal forests would result in cooler environments, better infiltration and storage of water, higher biodiversity, and more niches for vulnerable plants and animals. I do not want to create the romantic notion that the Incas were ecologically sound; however, in regards to the interaction with future water resources in the region, a quick survey of Inca geography reveals carefully cultivated stone aqueducts, constructed over 500 years ago, that still carry water—undeniable evidence of sensible water planning of long ago.

As mountaineers, unless we understand the socio-economic environment into which we are traipsing with our high-altitude equipment and cameras, and have some real tact, we threaten the dignity of the poor communities that we pass through. With care and preparation we can start to understand the why of poverty and leave more behind us than rubbish and a beggar mentality. To date, I am not too sure if a park authority or NGO has the answers to this challenge. But as

climbers, we can minimise our impacts and maximise the benefits of our visit by supporting community-based conservation and livelihood projects. For example, the Alpine Conservation Partnership (ACP)'s role in HNP has measurably improved the alpine grassland in the Ishinca and Pisco valleys (see fig. 1).⁵ Lastly, we can promote participatory conservation, which can become an integral part of protected alpine-area planning in the near future—this is critical.

About the Author

Rodney Garrard is a PhD Candidate at the University of Bern, Switzerland. Rodney is also a member of the NZAC's Recreation Advocacy Committee and represents the club on the International Mountaineering and Climbing Federation's (UIAA) Mountain Protection Commission. In July 2009, Rodney attended the workshop 'Adapting to a World without Glaciers: realities, challenges and actions' in Lima/Huaraz. Comments in this article are taken from discussions at this workshop. Rodney thanks Lonnie G Thompson, Marcos Zapata, Alton Byers, Jeffery Bury, and Aritza Monasterio Bilbao for their comments. After the workshop, Rodney, his wife Kerstin, Aaron Hantler and Aritza climbed Pisco Oesto and Chopicalqui in HNP. (Aaron went on to summit Huascarán Sur with Aritza.) For Rodney, the time spent in the park revealed a glaring gap between the existence of park regulations and the reality of implementation on the ground. You can contact Rodney at www.garrard.co.nz

⁵ The ACP is a global initiative to protect and restore alpine ecosystems. ACP is a joint venture between the Mountain Institute and the American Alpine Club.

References

- WN Adger, TA Benjaminsen, K Brown and H Svarstad. 2001. 'Advancing political ecology of global environmental discourses.' *Development and Change* 32:681-715.
- Aritza Monasterio Bilbao. Personal communication. Workshop discussion. 'Adapting to a World without Glaciers: realities, challenges and actions' Lima/Huaraz. July 2009.
- Jeffery Bury. Personal communication. Workshop discussion. 'Adapting to a World without Glaciers: realities, challenges and actions' Lima/Huaraz. July 2009.
- Alton C Byers. 'A comparative study of tourism impacts on alpine ecosystems in the Sagarmatha (Mt Everest) National Park, Nepal and the Huascarán National Park, Peru.' *Ecotourism and Environmental Sustainability*. Edited by J Hill and T Gale. London: Ashgate, 2009.
- Alton C Byers. Personal communication. Workshop discussion. 'Adapting to a World without Glaciers: realities, challenges and actions' Lima/Huaraz. July 2009.
- Lonnie G Thompson. Personal communication. Workshop discussion. 'Adapting to a World without Glaciers: realities, challenges and actions' Lima/Huaraz. July 2009.
- Marcos Zapata. Personal communication. Workshop discussion. 'Adapting to a World without Glaciers: realities, challenges and actions' Lima/Huaraz. July 2009.