

Raised Fields in the *Altiplano*



In Lakaya, one of the first communities to participate in the Wiñaymarka raised-field project, Aymara women gather harvested potatoes. A group of community members dance for the Pacha Mama (Mother Earth) to show gratitude for a bountiful crop. Researchers Alan Kolata and Oswaldo Rivera began archeological research in 1978 that later would lead to the reconstruction of raised fields. In 1986, peasant families began to reconstruct the agricultural fields in several communities.

Photo by Alan L. Kolata

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Few people are aware that a great nation of Native Americans still live in the heart of South America. The Aymara occupy a rugged, mountain world of soaring, glaciated peaks and forbidding plateaus perched around the shores of Lake Titicaca. They and their ancestors have lived on the rolling, seemingly endless high plateaus of southern Peru and northwestern Bolivia for millennia.

Gazing around them, Aymara see a landscape of constant change. One moment their high-altitude world is extravagant, glistening with water, bursting with the colors of mountain wildflowers and ripening grain. The next, it is parched cold, desiccated to a sterile, dun-colored desert. To the Western eye, the *altiplano* is a desolate, intractable place, unfit for humans. In Bolivia and Peru, Western-trained agronomists and other development specialists routinely characterize the *altiplano* as “soil unfit for agriculture, suitable only for extensive and temporary grazing.” Yet what these agronomists and development specialists see is an historical artifact. Their vision is short, focusing on the present and the near past. They assume that recent human underutilization of the *altiplano* stems from inherent environmental limitations. But the real causes of underutilization are sociological, historical, and economic in nature. Catastrophic demographic

collapse, internal migration driven by national and international economic forces, loss of traditional cultural practices – these elements are more germane for explaining recent, indigenous underutilization of the Andean *altiplano*. Knowledge of long-term historical and cultural developments in the area offers a truer perspective on its potential for human use.

In fact, over 1,000 years ago, the Andean high plateau was an astonishingly rich environment, one that supported vastly more people than today, in a highly organized pre-Inka society known as Tiwanaku. Why was the Andean *altiplano* more productive in precolumbian times? The answer lies in a special agricultural technology called raised fields, which was lost for the last millennium. This recently rediscovered technology now holds the promise of helping to solve the food problems of future generations in this poverty-stricken landscape.

Raised-field agriculture in the high plateau promotes drainage and lowers local water tables to reduce root rot. It mitigates the effects of frosts, and promotes the conservation of water and the recycling of essential nutrients. This intensive agriculture supported the native state of Tiwanaku, which flourished from 300 B.C. to 1000 A.D. The raised-field complexes of the Lake Titicaca region in Peru and Bolivia represent the largest, virtually continuous expanse of this cultivation system in the world.

The raised-field rehabilitation project represented at this year’s Festival combines modern technology with the agricultural and environmental wisdom of the past. It demonstrates that the *altiplano* is not, inherently, a marginal environment for agricultural development. With the proper technology, the high plateau has the potential for producing tremendous harvests and contributing to the development of the contemporary Native American inhabitants of the region.

— Alan L. Kolata