snowfield in a thick fog. They returned by the same route to the bivouac. On the 9th they crossed along the eastern face of Minaspata to Base Camp.

ICHIRO YOSHIZAWA, A.A.C. and Japanese Alpine Club

## Peru—Cordillera Vilcanota

Ritipampa del Quelccaya. A field party from the Institute of Polar Studies, The Ohio State University, Columbus, Ohio, made several ascents of the Ritipampa del Quelccaya, an ice plateau in the Cordillera Vilcanota, during the course of glaciological and geological investigations, in late June and early July, 1974. We approached the region from Sicuani, and climbed the icecap from the west. The field party was led by John Mercer, and included Cedomir Marangunic, Lonnie Thompson, and John Ricker. Our purpose was to conduct a preliminary study of the glaciology and glacial geology of the icecap and its environs to determine whether a large-scale investigation should be mounted. Α snow pit was dug on the summit of the icecap to a depth of 3.8 meters and a 3-meter core was taken from the bottom of the pit. Preliminary analysis suggests an annual accumulation of about 3 meters. The icecap is probably temperate. Glacial geological studies were concentrated in the valley of the Río Huancane. The moraine belts, 1, 5, and 9 km from the present ice margin, were examined. Glaciological studies included an examination of the pit wall stratigraphy, firn temperature measurements, and laboratory analysis of snow samples for oxygen isotope and microparticle concentrations. Preliminary results have been published in the Antarctic Journal of the United States of January-February 1975.

> JOHN RICKER, A.A.C. and PETER J. ANDERSON, Institute of Polar Studies

Chicllarazo, Cordillera de la Apacheta, and other climbs. Chuquichanca (Cordillera Vilcanota) revisited. The Apacheta is the first high pass (15,436 feet, 4705 meters) on the Via de los Libertadores from Ayacucho to the coast, not far from Lircay's celebrated Tambrayco. I had been lured to the place by Clements Markham's narrative but felt that the charm has gone with the opening of the new road. I climbed Chicllarazo (16,925 feet, 5167 meters) from here on June 17 via Patahuasi and its west ridge. This is the gray glacier-hung peak seen east from the pass which on modern maps has unnecessarily been called "Nevado Portuguesa." It serves as a first order triangulation point and affords a view of the eastern Andes ranging from Huaytapallana to Salcantay, and of the mysterious obelisk of El Tambrayco, just 18 miles northwest. Late on June 22 I left Hacienda San José down the Pariahuanca for Panti where suspicious locals stopped me in the dark. Hours later I managed to escape uphill to Pucacocha and along the irrigation ditch northward

into Quebrada Taulibamba and a dense *ceja* vegetation. The inner valley turns west and leads up to Illaycocha. At nine A.M. I was just in time to see the green lake before fog closed in. An icefall descends all along the south ridge of Illayrazo to its end in the lake. The lower part of the ridge is an amazingly well carved knife-edge, called Laso Tumi-glacier's knife-on Hacienda maps. I spent a night on Cerro Illaycocha (south of the lake, P 4690), quickly climbed Jatun Suni (16,010 feet, 4880 meters) and traversed into Jallalampa in almost constant fog and clouds. Jatun Suni refers to the flat-topped and southernmost glacier peak of the Huaytapallana Karu range, south-southwest of Illayrazo. A two-day excursion from Pucará, northwest of the Huarón mine, led me to the Chuchon entrance of Cordillera Callejón and up the Yuracyacu trail to a bivouac near Janchaycocha, Quebrada Ushpas, on June 27. At dawn I climbed Chururuyo (17,756 feet; P 5412 of the Miller survey) by its north side and east ridge. Locals rather seem to pronounce it Churuyoc. It provides a splendid view of all the lakes of the high puna, particularly in the morning, and of the distant Nevado Ulcumayo due east. On July 4 I passed the Cordillera Huaritanga from Huancayo to Huari, Chiquiac Pampa and the lake Yanacocha and climbed Cerro Asapara (15,879 feet, 4840 meters) the next day with excellent weather, then out to Añas and Trancapampa. A west-to-east traverse of the Acuvac ridge (16,404 feet, 5000 meters) offered a panorama of the lovely Laguna Pomacanchi (6 miles south) and the remote snowpeaks of Chumbivilcas and Coropuna. There is no water on Acuyac, the highest source found near Maychani (July 16). In the Marcapata valley, I made my way into the Chuquichanca granite area from San Isidro (see map in A.A.J., 1971, p. 418) and climbed Nevado de Comercocha (3 miles north of Yungate, c. 15,584 feet, 4750 meters); Yungate (c. 16,076 feet, 4900 meters), and Ananta (halfway between Nevado de Comercocha and Kiruyoj, c. 15,748 feet, 4800 meters) on July 26 and 28 respectively. On Yungate the route was up the northwest gully and the south ridge to the north (main) summit and down the west side.

## OLAF HARTMANN, Göttingen University

Colque Cruz Group, Cordillera Vilcanota, 1974. The British Commonwealth Andean Expedition consisted of Dr. Jeff Boyd, Howard Dengate and me, Australians; Mike Browne, Jim Jolly, Miss Jos Lang and Keith Woodford, New Zealanders; and Arthur Twomey, Canadian. With 19 horses hired from Mallma and Yanacancha, we moved to the head of the Quebrada Huiscachani de Yanacancha to establish Base Camp under the north face of Colque Cruz I at 15,750 feet. Weather and snow conditions were perfect during the whole stay. Colque Cruz had first been climbed by the Germans März, Steinmetz and Wellenkamp in 1953 from the south from the next valley parallel to ours, and again

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