

Cordillera Raura

JOHN RICKER

The following is a chapter from a guidebook in preparation on the Peruvian Andes. Maps and photographs are used especially to establish the positions of mountain features and to give local place names on Quechua and Spanish. Much confusion in the geography of the Cordillera Raura (and of the Peruvian Andes in general) has originated from the misnaming of peaks and the use of inappropriate foreign language place names, even when local names exist. Future visitors are encouraged to seek out and use native place names.

Ascents and route information, where known, are kept brief to enable alpinists and alpine tourists to continue in the Andean tradition to make their own climbing and route-finding decisions.

CHAINS of deep blue lakes, open swampy green valleys, rock and glacier-mantled peaks characterize the Cordillera Raura. In addition to natural beauty the popular press has made much of the fact that the Cordillera Raura is at the headwaters of three major tributaries of the Amazon, the Ríos Marañón, Huallaga, and Mantaro. The Río Marañón originates in the lakes Niñoqocha near Mina Raura.

Although the Raura is only 25 kilometers from north to south, there are many moderate and some extremely difficult climbs, with short approaches. However, none of these is as long as major routes in the world-renowned Cordillera Huayhuash situated just 10 to 15 kilometers to the northeast. Even though the Raura has been used to advantage by serious parties as training for both the Cordilleras Huayhuash and Blanca, these same parties have largely overlooked the extremely difficult routes on the highest peaks of the Cordillera Raura itself.

The serenity and beauty of the central portion of the cordillera has been broken by mining activity. Mina Raura, a lead-copper-silver mine, operates at an altitude in excess of 4600m. Rising stair-like from Caballoqocha a concentrator discharges evil wastes into the once blue lake. Above, the red roofs of the workers' housing seem to stretch to the very ice of the mountains. The muffled boom of blasting accompanies one to the summit of Torre de Cristal. But only a day's walk away, in one of the beautiful valleys, such as Laguna Surasaka, these aspects of the 20th century are forgotten. Rustic attempts are being made to extend workings at Mina Restauradora, at the head of the Quebrada Gaiko. Some of the ancient adits, once connected by tortuous llama trail to

Mina Raura, are threatened by avalanche from the west face of Torre de Cristal. An abandoned concentrator site on the roadside just north of Quichas indicates former activity in the valley east of Quichas, while south and east of Oyón abandoned coal mines are now being reassessed.

The recorded history of exploration and climbing in the Cordillera Raura is far from complete. In 1906 the indefatigable Annie Peck ascended part of Nevado Santa Rosa's northern glacier. O.M. Miller's survey for the American Geographical Society disclosed initial mining activity at Laguna Santa Rosa in September 1927. It was proposed to pack out ore by llama to Oyón at that time. Jenks on his visit of June 1939 failed to see signs of activity at the mine while attempting the southeast ridge of Patrón Sudeste. Like Annie Peck he reconnoitered the long northern glacier of Nevado Santa Rosa, just failing to climb Pichuyqocha before returning to Cerro de Pasco by horse.

According to Jenks and Cardich, historically the term *Raura* refers to Nevado Santa Rosa and the Siete Caballeros. The name *Gaiko*, Jenks explained, was confined to the Patrón-Torre de Cristal massif. At present both groups are referred to as Cordillera Raura, especially since the mine has also adopted the name.

Since Jenks' time a road has been built to Mina Raura and a permanent community established at ca. 4700m above sea level. Also the lovely Laguna Santa Ana has been drained to allow access to an ore body at the base of Matapaloma.

Glaciation

The Cordillera Raura is the southernmost of several major glaciated cordilleras north of the Tunshu group, Cordillera Central. Among spectacular features is the westerly-dipping ice plateau, Nevado Azuljanka (4800-5400m), which extends 10 km. to form the northern extremity of the range. The plateau rises eastward a maximum of 2½ km. in gentle undulations and a steep cliff wall marks its eastern margin. A tiny ice plateau is formed at the union of the Yarupáj-Torre de Cristal-Yanku ridges. Bulky-looking Nevado Santa Rosa supplies most of the remaining glacier ice. Permanent snow begins at about 5000m in the northern and central parts of the range, 5200m on the western outliers. Glacier limits extend down to ca. 5000m in the north, ca. 4850m on the east, 4750m on the western margin and ca. 4650m on the south sides. Glacier data on the map is based mainly on aerial photographs of 1962-63.

Climate and Weather

The climate is similar to that of the Cordillera Huayhuash. High-altitude climbing is almost always risky due to daily snowfall in the rainy season from January up to April. Also access roads can be washed

out during this period. Settled weather is most likely from June through July, though climbers have been active at various times from April to December in some years; in others even the month of June has been stormy.

Geology

We are indebted to Dr. John Cobbings, Overseas Geological Surveys, London, England for the following "Summary of the Geology of the Cordillera Raura".

The Cordillera Raura is a zone of eastward-thrusting fault plates. The high peaks of the Cordillera Raura, including Nevados Azuljanka, Rumiwayin, Yarupáj, Condorsenga, Santa Rosa, and the Siete Caballeros are parts of major anticlines trending north to north-west and are composed almost entirely of massive grey limestone of the Late Cretaceous Jumasha Formation. This rock varies from friable to fairly massive. The best rock climbing to date has been found on Nevado Condorsenga. At the road side on the west face of Condorsenga, numerous brachiopod and gastropod fossils are well-preserved.

The Celendin Formation (late Cretaceous) overlies the Jumasha and crops out near Patarqocha, and on the east side of Chuspiqocha. It consists of marls and limestones, extending south toward Tinkiqocha.

Parts of Nevados Torre de Cristal and Patrón, Cerro Yanku, and the Mina Raura itself border an intrusive zone of tonalite and quartz-diorite (probably early Tertiary).

The early Tertiary Calipuy Group includes andesitic to dacitic volcanic rocks, cropping out on the south-west side of Nevado Yarupáj massif and in the region of Laguna Putusay, north to Caballoqocha.

The Cordillera Raura straddles a major fault line between the miogeosynclinal basin facies of the Cretaceous to the west and the thinner anticlinal facies to the east. The fault line, unbroken along more than 160 km. of strike length, runs beneath the glacier at the eastern foot of Nevado Yarupáj and along the line of the Quebrada Yanku.

Access

The most direct access is by road from Lima via Churin and Oyón (3637m). Normally it is a one-day journey by bus to Oyón. The bus remains overnight, setting out for Mina Raura (ca 4600m) early the next morning. A market and co-operative food store at the mine provide a wide variety of food. The Oyón approach can be extremely dangerous for unacclimatized climbers. Time to acclimatize can be gained by staying at Oyón for a few days, though even Oyón is initially

too high for most people coming from the coast for the first time. Acclimatization camps at Quebrada Yanku (ca 4350m) or Laguna Surasaka (ca 4380m) would also be desirable before attempting to stay at Mina Raura.

Acclimatization at Cajatambo (3376m), 2 to 4 days walk west of the Cordillera Raura, would be easier than at Oyón. Cajatambo is also accessible by bus from Lima in one day. Yanahuanca (3184m), several days travel to the east of Cordillera Raura, can be reached only from Cerro de Pasco (ca 4300m), which is itself too high for proper initial acclimatization.

Peak Descriptions

Mountains are grouped arbitrarily in the following regions, separated from neighboring groups and other ranges by valleys, a pass or col: 1. The Azuljanka Ice Plateau Region. 2. Western Outliers of the Cordillera Raura. 3. Rumiwayin and Yarupáj Region. 4. Patrón, Torre de Cristal and Gaiko Region. 5. Chirajanka and Antakallanka Region. 6. Siete Caballeros, Santa Rosa and Condorsenga Region. Peaks are listed within each zone from north to south where possible.

Place Names: Only indigenous place names are used in the text and on the accompanying map. Mountains are sometimes named for pastures, rivers, lakes, or settlements near them. Peaks are frequently known by different names from different valleys. Some of the alternate names are indicated in parentheses. Rivers and tributaries are often known by the names of the farms or settlements along their length so that the name of the river may change every few kilometers.

Considerable variation is to be found in the Quechua dialects of the highlands of Peru. The spelling system used is as much as possible in accordance with the proposals of the third Congreso Indigenista Interamericano, in La Paz 1954; and the Centro de Investigación de Lingüística Aplicada, Universidad Mayor de San Marcos, Lima, 1972. Symbols used are as follows. *W* is used instead of the Spanish *HU*. *K* in Quechua is used to indicate 3 equivalent letters in Spanish: *K* as in *Kerosina*, *C* as in *canta*, *QU* as in *queso*. The post-velar stop (or fricative) *Q* indicates an important consonant in Quechua not usually recognized by non-speakers and often confused with the velar *K*. The exact pronunciation of *Q* varies regionally and depends also on its position within a word. *CCH* is used to indicate an aspirated *CH* as in the word *cheqchhi*. No attempt has been made to record differences in vowel length at this time.

Definitions of terms in Spanish are given in the Map Legend. *Qocha* and *Mayo* are used in place of *Laguna* and *Río* respectively where local usage dictates.

Peak Heights: The capital letter "P" before an isolated height in the text designates a high point or peak without a local name. All precise

heights are taken from mapsheets published by the Instituto Geográfico Militar, and from mining maps. Approximate heights are indicated (ca.) and are not to be relied upon for precise determinations.

Grading: Grades, where indicated, reflect the judgment of the original ascent party in the U.I.A.A. system. Since climbing standards vary widely caution is needed in interpreting route difficulty. Individuals should keep in mind such variables as the ability of the party concerned to acclimatize, season of the climb, weather and snow conditions, and what kind of experience party members are likely to have had.

Climbing parties: Only first ascents and new routes are listed. Climbers are indicated in alphabetical order. Rope partners are grouped together where information is available.

Abbreviations:

AAJ	<i>American Alpine Journal</i> , American Alpine Club, New York, U.S.A.
AAJ/CE	<i>American Alpine Journal, Climbs and Expeditions Annual Summaries.</i>
AGS	American Geographical Society, New York, U.S.A.
ca.	circa, approximately.
E	Este, east.
Journal	<i>Journal</i> , Swiss Foundation for Alpine Research, Zurich, Switzerland.
JDAV	<i>Jahrbuch des Deutscher Alpenverein</i> , Munich, West Germany.
JÖAV	<i>Jahrbuch des Österreichischer Alpenverein</i> , Innsbruck, Austria.
km.	kilometres.
L. (Ls.)	Laguna (Lagunas).
m	meters.
MW	<i>Mountain World</i> , Swiss Foundation for Alpine Research.
N	Norte, north.
Nev.	Nevado, snow peak.
NTD	no technical difficulty.
P	Point (map reference, spot height of a peak or hill).
PC	personal communication.
Q	Quebrada, valley.
Relieve	<i>Revista de Andinismo de la Provincia Cajatambo</i> , Churin, Dept. de Lima, Peru.
RPA	<i>Revista Peruana de Andinismo</i> , Club Andinista Cordillera Blanca, Huaraz, Ancash, and Club Andino Peruano, Lima, Peru.
RM/CAI	<i>Revista Mensile, Club Alpino Italiano</i> , Torino, Italy.
S	Sur, south.

UMS Unpublished Manuscript.
W west.

Glossary:

Definitions of most Spanish terms can be found in the map legend accompanying this article. Some additional terms are given below. Those marked *q* are in Quechua.

cerro (cerros)	hill
cordillera	mountain range
estancia	small farm estate
este	east
mayo <i>q</i>	river
mina	mine
nevado (nevados)	snow-covered mountain
noroeste	NW, northwest
norte	norte
oeste	west
punta	point
qocha <i>q</i>	lake
represa	dam
saka <i>q</i>	bridge
sudeste	southeast
sur	south

1. AZULJANKA ICE PLATEAU REGION

Azuljanka (blue cold place) is the local name applied to the long undulating ice plateau at the north end of the Cordillera Raura from the west. The highest point (5421m) is designated specifically as Nevado Azuljanka in this chapter and also is known as "Kuajadajanka" from the east. The ice plateau can be reached most easily from Oyón and Laguna Surasaka. Pack animals are available only at Oyón. Regular transportation bypasses the road to Laguna Surasaka at the Río Quichas bridge.

P5094m (P5107m DÖAV map 1939)

Route 1. From Q. Puchka climb up the western rock slopes to P ca. 5000m. Traverse along the rocky south ridge crest to P5094.

A. Bilczewski, A. Zyak, 29 July, 1971.

(The climbers followed this climb with a traverse of Nevado Azuljanka.)

PC H. Furmanik

Nev. Azuljanka 5421m (P5427m DÖAV map)

Route of first ascent unknown but probably climbed from Laguna Viconga (4453m) by the western slopes.

M. Luna J., S. Robles A., N. Robles A., V. Tana J., 8 Aug., 1959.

Relieve I 1960

Route 1. Climbed from vicinity of Estancia Pukacalle via SW slopes. Last 500m on the south ridge.

H. Furmanik, J. Weigel, 29 July, 1971.

PC H. Furmanik

Route 2. Traverse from P5094 along the long north ridge of the ice plateau to summit. Descend SW slopes to Estancia Pukacalle vicinity.

A. Bilczewski, A. Zyak, 29 July, 1971.

PC H. Furmanik

Nev. Sillajanka Norte ca. 5200m

Route 1. From Q. Chaucas, climb the snow and rock slope to the pass between Nev. Sillajanka and Nev. Azuljanka, then traverse to moderate snow slopes on the west side.

R. D. Clark, R. Gunn, 4 June, 1972. 6 hrs. return from the highest lake (ca. 4500m).

PC R. D. Clark

P5348m (P5357m DÖAV map 1939)

Route 1. From the vicinity of the Estancia Pukacalle up the western slopes of the icecap to a broad saddle. Climb the N slopes and N ridge to the summit.

J. Junger, B. Korzec, 29 July, 1971.

PC H. Furmanik

2. WESTERN OUTLIERS OF THE CORDILLERA RAURA

Only a few ascents are recorded from this region of minor peaks. They have all been approached from Laguna Surasaka.

Nev. Portachuelo ca. 5100m (probably P5214 of DÖAV map 1939)

Route 1. From the pass (ca. 4800m) ascend the S flank and probably the E ridge.

T. Egger, H. Raditschnig, May or June, 1957.

MW 1958/59

M. Meléndez, D. Rennie, and A. Soriano B. repeated the route and traversed to the next high point to the NW (ca. 5000m) in Sept., 1969.

PC A. Soriano

"Nev. Pukaranra" ca. 5100-5250m

An unlocated peak on the W wall of Q. Pukaranra. Approached from Q. Pukaranra at the head of L. Surasaka. Rock Climb by unknown route III-IV.

A. Cardich, H. Schmidt, 11 Sept., 1955.

JDAV 1956; PC E. Echevarría

3. NEVADOS RUMIWAYIN-YARUPAJ REGION

The usual access is by way of Laguna Surasaka or Mina Raura.

Nev. Pukacalle 5259m (P5272 of DÖAV map)
(Red Street). Also called "Kuli."

Route 1. From camp (ca. 4330m) in Q. Cheqchhi approach the col (ca. 5050-5100m) on the snow plateau between Q. Cheqchhi and Q. Chaucas. Traverse to the E of "Torre" and "Calua." Climb the SSW face and S ridge with detours onto the 60° E face. Snow and ice route.

N. Bedón, G. Dionisi, P. Malvassora, C. Rabbi. 23 June, 1968. Ascent 8 hours; 1 day return.

RM/CAI Feb., 1970

New route unknown but probably from the lake near the col (ca. 4700m) at the head of Q. Pukaranra. Climb the SW ridge.

M. Meléndez, D. Rennie, A. Soriano, Sept., 1969.

AAJ/CE 1971

"*Nev. Calua*" ca. 5100m
(White Hood). A peak SE and adjacent to "Pukacalle."

Route 1. Follow Route 1 *Nev. Pukacalle*, to the snow plateau. Then ascend E. Face of "Calua." Mixed rock and snow climbing. Rock sections Grade IV+.

G. B. Campiglia, V. Lazzarino; O. Bastrenta, G. B. Fiolin, G. Ferrari. 23 June, 1968. Ascent 8 hours; 1 day return.

RM/CAI Feb., 1970

"*Torre*" ca. 5050-5100m
A tower (*torre*) of steep rock on the W, snow and ice on the S and E, situated ½ km W of the saddle between Q. Cheqchhi and Q. Chaucas.

Route 1. As for *Pukacalle* Route 1; from the snow plateau descend to the base of the E face and climb 45° to 65° ice. Rappel on descent.

G. Dionisi, R. Lingua, C. Rabbi. 25 June, 1968. Ascent 7 hours; 1 day return.

RM/CAI Feb., 1970

Nev. Rumiwayin 5580m (Peak No. 9, 5589m Miller-Hodgson map)
(approximately means: stone house). Known as Cheqchhi from the W and as Puchka from Q. Chaucas.

Route 1. As for *Pukacalle* Route 1; from the snow plateau climb the icy NW ridge detouring to the E side near the summit.

O. Bastrenta, R. Carascal, C. Ferrari. 21 June, 1968. Ascent 10 hours, 1 day return.

RM/CAI Feb., 1970

Rumiwayin Oeste ca. 5300m

Also called "Kuli." A minor peak on the NW ridge of *Rumiwayin*.

Route 1. From a camp (ca. 4300m) in Q. Cheqchhi ascend the W and N glaciers and the N (45-50°) ice slopes.

N. Bedón, G. Dionisi, G. B. Fiolin, R. Lingua. 21 June, 1968. Ascent 7 hours; 1 day return.

RM/CAI Feb., 1970

Route 2. As for Route 1 but climb the ESE ridge of mixed ice, snow and rock. Rotten rock to Grade IV. Descend N slopes.

G. B. Campiglia, V. Lazzarino, P. Malvassora, C. Rabbi. 21 June, 1968. Ascent 7½ hours; 1 day return.

RM/CAI Feb., 1970

"Nev. Curpa Curpa Norte" ca. 5095m

(an alpine plant).

Route 1. Ascend the NE rock ridge from Q. Gaiko. NTD.

J. Ricker. 3 Oct., 1969. ½ day return.

AAJ/CE 1971

Nev. Yarupáj Norte ca. 5675m (P5630m Hodgson-Miller map)

The name is also written Yarupá.

Route 1. From Q. Cheqchhi (ca. 4500m) ascend scree and granite slabs and cross the heavily-crevassed western glacier. Climb the 45-55° ice on N side of W ridge to summit. Lightning and snow storm during the original ascent forced a bivouac (ca. 5000m) on the western glacier on the descent.

H. Huber and A. Koch. 11 Sept., 1955. 1½ days return.

JDAV 1956

Route 2. From Mina Raura cross the Pampa de Hielo. The route is unknown from here but the most likely choice would have been the NE ridge.

T. Egger, H. Raditschnig. 29 July, 1957.

RPA 3, 1956/57

Route 3. Ascend to camp at Yarupáj-Gaiko col from Mina Raura. Descend glacier at head of Q. Nieve Cristal and climb rocks to Rumiwayin-Yarupáj col. Ascend NW ridge to subsidiary summit. Traverse W face to N peak.

B. Clark, C. A. G. Jones. 2 Sept., 1961. 18 hours return from camp.

PC C. A. G. Jones

Route 4. From Q. Cheqchhi (ca. 4330m) ascend over a moraine up a 300m icy couloir to the basin of the W glacier. Then climb the ice buttress to the summit ridge. Traverse northward to the N peak. Descend the same route with some rappels.

G. B. Fiolin, G. B. Campiglia; G. Dionisi, C. Rabbi; O. Bastrenta, P. Malvassora. 30 June, 1968. Ascent 10 hours; 1 day return.

RM/CAI Feb., 1970

Nev. Yarupáj Sur 5685m (P5703m Hodgson-Miller map)

Also called Yarupáj Central.

Probably climbed by traversing the north ridge from Yarupáj Norte.

T. Egger, H. Raditschnig. 29 July, 1957.

RPA 3, 1956/57

Route 1. From Q. Cheqchhi (ca. 4330m) place a high camp (ca. 5000m) on the W ridge. Ascend part of the W ridge, traverse across the SW face to the S ridge. Climb the exposed S ice ridge to the S peak.

V. Lazzarino, C. Rabbi. 28 June, 1968.

RM/CAI Feb., 1970

Cos. Yanku ca. 5150m (P5102m Hodgson-Miller map)

Also called Murugallo.

Both peaks are frequently climbed along the gentle though exposed North ridge.

4. NEVADOS PATRÓN—TORRE DE CRISTAL—GAIKO REGION

All these peaks are accessible from Mina Raura.

Nevs. Patrón 5236m to ca. 5275m

All peaks were probably traversed by S. Jungmeier and H. Raditschnig, 25 July, 1957, from Mina Raura (*RPA* 3: 1956/57). The most likely route would be the SE slopes of Patrón SE (5236m) traversing over the central peak (ca. 5250m), NW peak (5273m) and N peak (ca. 5275m), descending to Tinkiqocha (ca. 4350m). It is possible that the peaks were climbed earlier, especially the SE peak.

Patrón Sudeste 5236m

The most frequently climbed route is the SE slope either on hard, banded argillite or snow and ice, from Mina Raura. W. Jenks (solo) made the first recorded attempt on the rock route to nearly 5100m from Caballoqocha. It took him 3 days to approach on horseback from Goyallarisquisga to the east in June, 1939.

Patrón Central ca. 5250m

This peak is usually climbed as part of a traverse of the 3 summits facing the mine.

Patrón Noroeste 5273m

This, the NW peak, is often climbed by the W face, after ascending the Torre de Cristal-Patrón col from the Mina Raura.

The above three peaks have been called Patrón Sur, Patrón Central and Patrón Norte, in some accounts, since these are the only three peaks seen from the mine area. However, the true geographical north peak (ca. 5275m), possibly the highest summit on the mountain, cannot be ignored, and is now designated *Patrón Norte*, and the others are designated as geographically as possible considering this history.

Patrón Norte ca. 5275m

The route used on this peak is likely to have been the south ridge, though no conclusive proof has been found.

Nev. Torre de Cristal 5529m (Peak 10-5539m Miller-Hodgson map)

Called Flor de Loto (Lotus Flower) from the east.

Route of first ascent unknown but probably from Mina Raura up the SE spur, or traverse on the eastern slopes below the crest of the spur; climb along the narrow, doubly-corniced E summit ridge.

S. Jungmeier, E. Krenmayr. 31 July, 1957.

RPA 3 1956/57

Route 1. As above but beginning on the NE slopes of Matapaloma, up loose steep rock to near the crest of the SE spur for a bivouac. Then proceed via the SE spur and E ridge of Torre de Cristal. The minor peak on the NE spur of Torre de Cristal was climbed on the descent.

P. Bebbington and B. Clark. 9 Aug., 1961. 3 days return, 2 nights at bivouac.

UMS P. Bebbington; PC C. A. G. Jones; AAJ/CE 1962; *RPA* 5: 1960/61

Route 1a. Variant. As above but beginning in gully on SW slopes of Torre de Cristal-Matapaloma Col.

D. R. Clark, R. Gunn, R. Wilson. 30 May, 1972. Ascent 1½ days from camp (ca. 5000m) on SW glacier. Bivouac near summit. Descent 1 day from summit.

AAJ/CE 1973

Nev. Matapaloma 5307m

Route 1. From Mina Raura, probably N slopes to Matapaloma-Torre de Cristal Col. Then ascend NW ridge. Loose rock.

O. Dollfus, C. A. G. Jones, F. Mégard. 28 July, 1961.

PC C. A. G. Jones; UMS P. Bebbington

Route 2. From Mina Raura up SW face directly, then 30m climb along NW ridge to summit.

J. Junger, B. Korzec. 3 Aug., 1971.

PC H. Furmanik

5. NEVADOS CHIRAJANKA—ANTAKALLANKA REGION

A massif of isolated minor peaks to the north of and approached from Mina Raura.

Nev. Chirajanka ca. 5050m (P5060m Hodgson-Miller map)

Route 1. First recorded ascent. Approach from Tinkiqocha. SW glacier and SW face.

R. Carpenter, G. Ziegler. 18 June, 1971.

PC G. Ziegler

6. NEVADOS SIETE CABALLEROS—SANTA ROSA— CONDORSENGA REGION

The eastern arm of the Cordillera Raura is almost always approached from Mina Raura or the mine road.

Nevs. Siete Caballeros ca. 4950-5100m

(Seven Gentlemen). The Siete Caballeros have been ascended by many parties from Mina Raura. The southernmost peaks are probably most frequently climbed from the west, and it is probable that earlier ascents than those recorded, have been made.

N. Bedón, S. Jungmeier, E. Krenmayr climbed a number of the Siete Caballeros from Mina Raura, beginning on the northern glacier on 29 July, 1957. At that time they were called the Cinco Caballeros, at least in climbing journals. The peaks traversed would most likely have been: 5, 4, 3, 3 Sur, 2, and 1 (see map).

RPA 3, 1957/58

The first traverse, probably from S to N is believed to have been made by E. Booth, and P. Bebbington, when they climbed 10 peaks on the ridges north of Santa Rosa in 6 days. 13-18 August, 1961.

UMS P. Bebbington; AAJ/CE 1962.

Caballero 3 ca. 5050m

Route 1. Ascend a glacier route on W slope and N ridge from Tinkiqocha.

E. Anderson, R. Carpenter, K. Jimmerson, L. Vanden-Brock, G. Ziegler. 13 July, 1971.

PC G. Ziegler

Caballero 6 ca. 4950m

Route 1. Ascend W slope and N ridge from the W side of Tinkiqocha.

R. Carpenter, G. Ziegler. 13 July, 1971.

PC G. Ziegler

Caballero 7 ca. 4950m

Route 1. Ascend W ice slope and S ridge from the W side of Tinkiqocha.

R. Carpenter, J. Carpenter, K. Jimmerson, L. Vanden-Brock, G. Ziegler. 13 July, 1971.

PC G. Ziegler

Nevs. Pichuyqocha ca. 5150m (P5215 Miller-Hodgson)

There are actually two rounded summits of nearly equal height. Route unknown but probably by the NW glacier.

P. Bebbington and T. Booth, between 13-18 August, 1961.

UMS P. Bebbington

Nev. Santa Rosa 5706m ("Cerro Raura", Miller-Hodgson, Peak 8, 5717m)

Called Costillanjanka from the SW; Pichuyqocha from the east.

Route unknown but probably from the Mina Raura by way of NW glacier and ridge.

T. Egger, S. Jungmeier, E. Krenmayr, H. Raditschnig. 27 July, 1957.

RPA 3 1956/57

Nev. Santa Rosa Norte 5479m (P5493 Miller-Hodgson)

Route unknown but probably from mine road (ca. 4700m) via NW glacier and ridge.

M. Luna J., S. Zúñiga M., A. Ríos R., J. Herbozo. 12 Oct., 1956. 1 day return.

Relieve 1, 1960

Nev. Condorsenga 5379m (P5349m Miller-Hodgson)

(Condor's Nose).

Route unknown but probably from Mina Raura and road, on the N side of the mountain.

T. Egger, E. Krenmayr. 25 July, 1957.

RPA 3 1956/57

Route 1. Ascend the small steep glacier between the two NW ridges. This is the most frequently used route today and may be that of the original ascent party.

Route 2. From the mining road climb up the rock spur W of the Condorsenga-Santa Rosa col. Ascend the snow slopes to the steep NE buttress. Climb up moderate rock to the snow-covered rock slabs of the poorly defined S ridge. Traverse to the peak.

R. Gürtler, F. Marx, W. Uttendoppler. 28 May, 1965. Ascent 4 hours. 1 day return.

Der Bergsteiger 8, 1966

Route 3. Ascend the center of the E rock face, from the snow plateau between Condorsenga and Santa Rosa. Descend the NE ridge.

A. Bilczewski, A. Zyak. 1 Aug., 1971. Ascent 7 hours.

PC H. Furmanik

REFERENCES

1. Furmanik, Henryk. 1972. "Cordillera Blanca, Raura, Volcánica and Central." *AAJ/CE* 1972: 166-167. Polish Expedition of 1971.

2. Huber, Hermann. 1956. "Jungmannschaft auf Kordilleren-Kundfahrt." *JDAV* and *JÖAV*, 1956: 56-57. German Expedition of 1955.

3. Huber, Hermann. 1959. *Journal* 2: 70-74. German Expedition of 1955.

4. Jenks, W. F. 1940. "Climbs in the High Andes of Peru." *AAJ* 1940-42: 157-176. Exploration by an American Geologist, 1939.

5. Klier, Heinrich. 1959. "Nevado Jirishhanca and El Toro." *MW* 1958/59: 76-91. Austrian Expedition of 1957.
6. Lingua, Renato. 1970. "La Spedizione 'Ande 68.'" *RM/CAI* Feb., 1970, vol. 89 (2): 37-55. Italian Expedition of 1968.
7. Miller, O. M. 1929. "The 1927-28 Peruvian Expedition of the American Geographical Society." *Geographical Review* 19(1): 1-37. One of the first topographical surveys.
8. Schmid, E. 1965. "Berge Unter Fremden Sternen." A book about the Swiss Expedition, 1965.
9. Uttendoppler, Willi. 1966. "Streifzüge im Land der Inkas." *Der Bergsteiger*, vol. 8: 615-629. Swiss Expedition of 1965.
10. Uttendoppler, Willi. 1966. "Swiss Expedition from Bern to Cordillera Raura and Huayhuash." *AAJ/CE* 1966: 172-173.
11. *AAJ/CE* 1958: p. 108. Austrian Expedition of 1957.
12. *RPA* 3, 1956/57: 53-54. Ascents in the Cordillera Raura. Austrian Expedition 1957.
13. *RPA* 5, 1960/61: 46-47. Ascents in the Cordillera Raura. English Expedition 1961.
14. *Relieve I* 1960: Ascents by residents of Churin-Oyón valley, 1956-59.
15. *AAJ/CE* 1962: 259-260. London School of Economics Expedition, London, England, 1961.

In addition the *American Alpine Journal*; the *Alpine Journal*, London, England; the *Journal* of the Swiss Foundation for Alpine Research; and the *Revista Peruana de Andinismo* provide or used to provide summaries of climbing activities in Peru. Only one issue of *Relieve* was ever published, now out of print, as are back issues of the *Revista Peruana de Andinismo*.

Much of the needed route information could only be obtained by personal communication with the following people to whom I am greatly indebted; however any inaccuracies are my responsibility. Corrections and additions would be welcomed, especially those concerning the Austrian Expedition of 1957, the English Expedition of 1961, and climbs that have been inadvertently overlooked.

Robert D. Clark
 Evelio Echevarría C.
 Dost Felber
 Henryk Furmanik
 Roberto Gunn
 Chris (C. A. G.) Jones
 Máximo Luna Jiménez
 Akira Miyashita
 César Morales Arnao

I. Drummond Rennie
Arturo Soriano Bernardini
Willi Uttendoppler
Rob Wilson
Gary Ziegler

MAPS

1. Amos, B. J. 1968. "La Cordillera Raura" ca. 1:25,000. Uncontrolled photo mosaic map. (Unpublished.)
2. Cardich, Augusto. "Croquis de la Naciente del Río Marañón." (Source unknown.)
3. Cardich, Augusto. "Croquis de las Nacientes del Río Huallaga." (Source unknown.)
4. Miller, O. M. and K. M. Hodgson. 1927. "The Sources of the Marañón and Mantaro Rivers." American Geographical Society 1929; 1:200,000; 100m contours. Available from the *Geographical Review* 19(1): Plate I. AGS, New York, U.S.A.
5. Soriano Bernardini, Arturo. 1967. "Trabajo Cordillera Raura." Sketch map, Mina Raura region. Available from Club Socorro Andino, Lima, Peru.
6. Deutscher-Österreichischer Alpenverein. 1936. "Cordillera Huayhuash." 1:50,000; 50m contours. This map shows the northern portion of the Cordillera Raura. (Out of print.) Sometimes available from the *Peruvian Times*, P.O. Box 531, Lima, Peru.
7. Instituto Geográfico Militar, Lima, Peru. 1971. 1:100,000 series; 50m contours. Hoja Oyón 20-j and Hoja Yanahuanca 21-j. Available only in Lima.

ACKNOWLEDGMENTS

The author would like to thank the following people: Brian J. Amos of London, England; Frank Hepburn of Edinburgh, Scotland; Máximo Luna Jiménez of the Club Andinista Oyón, in Churin; Jaime Fernández Concha, geologist, and Samuel Guia, superintendent at Mina Raura, for help in the field. Oliver Perrotet of Zurich and Lima designed and drew the map freehand. W. P. Broda, Scipio Merler, and James Tupper, all of Vancouver, B.C., Canada, helped with translations in German, Italian, and French, respectively. Both Evelio Echevarría C. and César Morales Arnao made available unique historical material. The active encouragement of César Morales, for many years, has made this work possible.

