

**NORTHERN ANDES OF CHILE AND ARGENTINA
(Between Lat.21°- 31° South)**

In the extreme south of Bolivia there commences a vast zone of semi-desert which runs south through lat.21°- 29° S. for c.900 kilometres with a width of 400 kilometres. Generally speaking, this is a desolate region of which the central and principal section is the Puna de Atacama, an elevated plateau some 3000-4000 metres high, with deep-cut valleys and salt water lakes (salares), some of which are dry and crystalline.

The mountains, which are not particularly difficult technically, have a permanent snowline at c.5500 metres, giving rise to a characteristic snowy cap. In the main they are isolated from each other, rising at the margins of the Puna de Atacama, but several peaks rise in the interior, even out of the salares. The peaks bordering the Puna are generally considered as two cordilleras; the western following the Chile-Argentina border, the eastern standing wholly in Argentine territory. The principal problems for climbers are altitude and access; drinkable water is almost unobtainable and climbers must expect to carry supplies sufficient to enable them to reach snowline camps. The best period for climbing is the southern summer, from December to February.

The principal peaks, from north to south, are as follows. First Ollague on the Chile-Bolivia border; then inside Chile the mountain complex of Aucanquilcha, Cerro Palpana, and the twin volcanoes San Pablo and San Pedro. Thence Tocopuri, Volcàn Putana and Licancabur, all placed on the Chile-Bolivia frontier. Inside Chile lie Acaramachi, Volcàn Lascar, and the little known Cerro de Rio Negro, which is to the east of the Salar de Atacama. One hundred kilometres to the east of Licancabur rises Cerro Sapaleri, meeting point of the boundaries of Chile, Bolivia and Argentina. Between lat.24°- 25°S. lie Cerro del Rincon, Cerro Pular, Volc n Socompa and Lulllailluco; and in Argentina the majestic Nevado del Chañi, Nevado del Acay, and Nevado Cachi. Further south in Argentina are Volcñn Antofalla and Cerro Galñn, which rise directly from the Puna de Atacama.

Around lat.27° S. the Chile-Argentina boundary turns westwards for about 100 kilometres. This section contains several notable peaks, i.e. Nevado San Francisco, Incahuasi, Cerro El Muerto, the massif of Ojos del Salado, the Tres Cruces complex, and Volcàn Copiapò which lies inside Chile. In Argentina are Cerro del Nacimiento, Cerro Aguas Calientes; and a little further south, Nevado de Pissis and Cerro Veladero. Between there and lat.29°S. there rises on the Chile-Argentina border Cerro del Potro; also the Argentine peaks Nevado Bonete and, further east, Nevado Famatina in the Sierra de Sañogasta.

Between lat.29°- 31°S. the principal cordillera of the Andes has only one axis and marks the Chile-Argentina frontier. There are numerous summits in the region, predominantly of volcanic origin, and almost all permanently free of snow. From north to south some of the more important are--Nevado de los Tumbillos; Cerro del Toro; Cerros Amarillos; the Doña Ana massif; Cerro Escabroso; the Cerro Tòrtolas massif; and the Cerro Olivares (or, Porongos) massif, which includes Conconta and Tapada. The northern Andes may be said to finish about 100 kilometres further south at the Paso de las Cuevas (lat.31°10'S.).

Following the remarkable pre-Colombian ascents the first recorded modern activity on the mountains of northern Chile and Argentina was a possible ascent of Incahuasi in 1859 by the engineer E.Flint. This was followed by a few isolated climbs but the first main events were the activities of the members of the Chilean Comisiòn Exploradora del Desierto y Cordilleras de Atacama during the years 1883-89, whose task was to make topographical, geological and mineral surveys of the region.

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Their leader was Francisco Jos, San Romàn (1838-1902), who produced an important and fascinating record of their work in his book, *Desierto y Cordillera de Atacama*. The Commission, based in Copiapò, made eleven expeditions, each of three to six months duration, of which five were in the mountains. Six peaks between 5100-5700 metres were climbed and the ascent of Licancabur was attempted. In his book San Romàn gives some vivid descriptions, not only of the perils of exploring these high mountains but also of his love for the arid and desolate region which was the object of his studies.

San Romàn's surveys were followed by the surveys of the Boundary Commissions. This work was directed on behalf of Chile by Luis Riso Patròn, and for Argentina by Rudolf Hauthal, who made first ascents in the 1890s of Rincòn, Clavillo de Aconquija and the Argentine peak Cerro Colorado. Another important Andean explorer was Frederick Reichert, a German geologist employed by the Argentine government, who also visited the area in 1904 and 1905, climbing Cerro de la Aguada, Nevado de Chañi and Socompa. One of the most famous explorers of the Puna was Walther Penck.

Walther Penck (1888-1923) was the son of the well-known German geographer Albrecht Penck. As a gifted geographer and geologist himself, he was employed by the Argentine government from 1912 to 1914 to make a geographical and geological survey of the Puna. Penck was already an accomplished alpinist, having made guideless ascents in the Pennine Alps and Dolomites. During his South American journeys he covered the breadth of the Puna between the Gran Chaco and the Pacific, between Tucuman and Caldera, and penetrated northwards as far as Antofagasta de la Sierra. In January 1913 he made the first ascent of Nevado Bonete by himself, nearly losing his life in a blizzard. In the following December he climbed Nevado Incahuasi and Nevado San Francisco, before completing his work on the map of the Fatima range and the Chascuil valley from baselines at almost 5000 metres. Many climbers have now visited the Puna de Atacama; thus the following notes outline only the more significant expeditions and peaks, most of which have now been climbed a number of times.

Llullaillaco is a volcano situated on the Chile-Argentina frontier, and its most recent eruption occurred in 1877, on the occasion of the Iquique earthquake. It is a massive mountain partially covered with snow and ice and, as already mentioned, was climbed in pre-Colombian days. After several attempts the first modern ascent was made in December 1952 by the Chilean andinists Bion Gonzales and Juan Harseim, members of an expedition who had tackled the mountain by the north face, after ascending the Quebrada Zorritas. The climb required the placing of an intermediate camp. During the course of the second ascent in 1953 one of the climbers was killed in a long fall down a steep slope of ice. In 1958 the Austro-Argentine Atacama Expedition led by Mathias Rebitsch carried out extensive archaeological excavations on the mountain.

The majestic Nevado del Chañi is the highest peak in the vicinity of the Argentine city of Jujuy, and its summit is permanently snow-capped. It was first climbed in 1901 by members of the Swedish Nordenskjöld expedition but the details were not unravelled until the second ascent three years later when Reichert followed a trail of messages left in bottles up the north face of the peak. In 1948 the sixth ascent was made via the east face, the work of a group of andinists led by Padre Oliviero Pellicelli, who erected a large cross on the summit.

Nevado del Acay lies in the Argentine province of Salta and rises at the head of the Quebrada de Incahuasi; it has a rather mysterious mountaineering history. It seems that the first ascent was made in

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1914 by two Argentines and a Chilean. In 1924 there was another attempt but the party disappeared during the climb, while in 1926 another Argentine Gabino Cruz apparently reached the top. The earliest ascent of which we have a precise record was the next (fourth?) on 26 December 1950. The three climbers recovered a human tibia near the summit, thus confirming the 1924 tragedy.

Nevado de Cachi, which rises to the east of the Jujuy valley, has two separate summits of almost identical height, the principal one being known locally as San Miguel. The main peak was attempted in 1904 by Reichert who reached c.5800 metres, and again in 1909 by Professor Franz Köhn who was less successful. Both attempts were made by following up the Quebrada de las Arras. In 1948 François Bourcher and Carlos Stegmann tried the east face but were stopped by violent whirlwinds of snow. In 1950 Padre Pellicelli and two companions reached the top after a long and difficult climb.

Before considering the important massif of Ojos del Salado, mention may be made of the activities in 1939 of Count Aldo Bonacossa's expedition. Firstly, in February and March 1939, Bonacossa and his companions, Remigio Gerard and Carlo Negri, made between them six ascents in the vicinity of the Chile-Bolivia border. First ascents were made of--the highest peak of Tocopuri, in deep snow; Cerro Colorado, by the north-east face; Cerro Degli Alpini, by the north-west face; Cerro Maria Di Piemonte, by the north-west face; and further south, Acaramachi, an isolated pyramid partially covered with snow, which was climbed by a steep snow slope and ice-glazed rocks. Their other climb was Licancabur, which has already been mentioned.

Ojos del Salado

Lying at lat.27°06' S., long.68°32' W., to the south of the Puna de Atacama, Ojos del Salado is the second highest peak of the Americas, only seventy-five metres lower than Aconcagua. It rises on the Chile-Argentina border mid-way in a string of 6000-metre peaks, where the main cordillera runs east-west for 100 kilometres. The principal mountains are the three-peaked Tres Cruces, Cerro Solo, the several summits of Ojos del Salado, El Muerto, Nevado Incahuasi and Nevado San Francisco: these first two were climbed by Penck in 1913. Other high mountains in this sector, accessible from a central base camp, are the Chilean peak Copiapé, the frontier peak Cerro de los Patos, and the Argentine peaks Nevado Pissis and Cerro Nacimiento. This whole section of peaks can be approached from either Chile or Argentina.

There were no more climbers after Walther Penck until the second Polish Andes expedition in 1936-37. The party was superbly equipped and consisted of four experienced men--Justan T.Wojsznis, Stefan Osiecki, Witold H.Paryski and Jan Alfred Szczepanski. A ten-day march from the Argentine town of Tinogasta, with four arrieros and twenty-five mules, brought them to base camp near Tres Quebradas, at an altitude of 4300 metres, in the heart of the group; even from here most of the great peaks are fifty kilometres or more away. During the first three weeks of February 1937 the climbers, working mostly in pairs, successfully carried out ascents of Cerro de los Patos, Tres Cruces (central and south peaks), Pissis, Nacimiento (two tops) and an unnamed volcano now known as Volcyn de Viento. Having discovered a possible approach from the south-west, Wojsznis and Szczepanski now attacked Ojos del Salado itself. With considerable help from their arrieros they managed to place an advanced camp at 5800 metres. After two days of slogging over endless hillocks, steep scree slopes and fields of nieves penitentes they reached a subsidiary summit (6720m), and the next day the highest point of this most difficult mountain. Apart from their climbing successes the party made archaeological finds and discovered a large active volcanic crater (at c.6500m) on Ojos del Salado.

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After the Second World War, Argentine climbers began to take an interest in the Puna de Atacama but three expeditions in the early 1950s were all unsuccessful. In 1956 came the first Austro-Swedish Atacama expedition led by Mathias Rebitsch. The other members were Anders and Verena Bolinder and an Argentine climber Sergio Domicelj. This time the climbers made a direct approach to Ojos del Salado from the south-east, Rebitsch reaching the top alone, Domicelj having suffered frostbite at 6400 metres. Meanwhile the Bolinders made the first ascent of Cerro Aguas Calientes, Bolinder himself also making a solo ascent of Incahuasi Chico. The expedition then moved north to the Argentine volcano Cerro Galàn where, after three days' laborious excavations, Rebitsch unearthed some unique Inca figures of hammered silver.

Within a few days of Rebitsch's ascent of Ojos del Salado two Argentine parties failed on the Polish route but a Chilean military expedition led by Captain Ren, Gajardo reached the top from the north. On the basis of aneroid readings the Chileans claimed that Ojos del Salado was 7048 metres high. As a result, an American Alpine Club expedition, led by H.Adams Carter, undertook a fresh measurement of the peak during July-August 1956, establishing its exact height at 6885.5 metres, which is now the accepted figure.

Following a series of Argentine successes on Ojos del Salado, Rebitsch led another Austro-Swedish expedition to the area in 1965. A number of lesser peaks were climbed for the first time in a summer of very bad weather, as well as carrying out important archaeological work. In 1970 members of a joint Chilean-Japanese expedition climbed Ojos del Salado and made first ascents of four adjacent peaks to the north-west, west and south-west.

Peak List

Northern Chile

(Isolated peaks and massifs on the Chile-Argentina frontier, and peaks inside Chile. See also under Bolivia, Cordillera Occidental. Listed from north to south. † indicates peak originally climbed in pre-Colombian times, or on which prehistoric remains have been found.)

Peaks north of Licancabur

(a) Frontier peaks

P.5142m: 1-1906 by Chilean surveyors.

Paroma 5720m: N.of Volcån Ollague:

Ollague 5870m: 1-1888: Sulphur fields worked near top.

Araral 5680m: 1-1978)

Ascotån 5480m:) Italo-Argentine expedition.

Cerro del Inca 5020m:)

Tocorpuri 5755m: 1-1939.

Volcån Colorado † 5742m: 22°38' 67°57': 1-1939 via N.E.face: Inca ceremonial sites found in 1975.

Maria di Piemonte 5840m: 1-1939 via N.W.face.

Cerro de los Alpinos 5820m: 1-1939 via N.W.face.

Volcån Putana 5890m:

Curiquinca 5769m: Archaeological ascent in 1980/81.

Sairecabur 5970m: Archaeological ascent in 1980/81.

Licancabur † 5930m: 1-1884: Major excavations-1953.

Tacora: See Cordillera Barroso in Peru.

RGS-IBG Expedition Advisory Centre, 2nd edition, May 1994**(b) Other peaks***Nevado de Putre (Tarapacà) 5830m: 18°07'S. near Peruvian border: 1-1979/80 by large group.**Tata Jachura † 5240m: 19°30'S 69°06'W: 1-1907 by Chilean surveyors.**Piga 5020m: 1-1906 by Chilean surveyors?**Columtusca (Yarvicoya) 5210m: 1-1907 by Chilean surveyors.**Miño † 5661m: 21°11'S 68°37'W: conical volcano located E.N.E. of Oyahue Pass on the Chile-Bolivia border: 1-1940s by Chilean Army surveyors: Via southern slopes-1972.**Aucanquilcha † 6180m (6100?): 21°13' 68°30': 1-1935, or possibly earlier by local miners.**Palpana † 6045m: 21°32'S. 68°24'W.: remote peak surrounded by desert salt flats: 1-1977.**San Pedro 6063m: adjacent to San Pablo: 1-1903: Traversed by 25 climbers in 1978.**San Pablo 6118m: 1-1910: Traversed by 25 climbers in 1978.**Paniri † 5946m: 23°03' 68°14': Explored by archaeological expedition in 1980, finding extensive ruins on top.**Copacoya 4807m: located in the high mountain area E.of Calama near the Chile-Bolivia border: Ascent recorded in 1978.**Pumiri 4907m:) Near Chile-Bolivia border.**Tata Sabaya 5385m:) Ascents in 1985.**Pabellón del Inca † 5110m: 20°55' 68°38':)**From Licancabur to Ojos del Salado***(a) Frontier peaks***Volc n Juriques † 5662m: 22°50'S 67°50'W: highest point is at N.E. end of crater: 1-1972 from Cajén valley to the south: Explored by archaeological expedition in 1980.**Curutu 5050m: 1/2-1904 by Chilean surveyors.**Cerros del Rincón 5594m: 24°02' 67°19': 1-1893.**Salin (Llanin) † 6060m: 24°20' 68°04': Climb recorded in 1960.**Socompa † 6031m: 24°23' 68°15': 1-1905.**Chuculai † 5420m: 1-1885 (Indian knife found on top).**Llullaillaco † 6723m: 24°43' 68°33': 1-1952 via N.face: N.W.face, large icefield-1988.**Volcàn Azufre (Lastarria) 5680m: 25°10'S. 68°30'W.: 1-1885.**Sierra Nevada 6103m: 26°30' 68°37':***(b) Other peaks***Acaramachi (Pili) † 6044m: isolated pyramid: 1-1939 via steep snow slope, icy rocks: Inca treasure found in 1972.**Aguas Calientes (Volcàn Simbad) 5924m: 1(?) -1971 by 2 Chilean climbers.**Volcàn Lascar 5641m: 23°22' 68°38': located on high barren plateau: 1(?) -1963 from camp at c.4000m. Sulphurous emissions.**Tumisa † 5658m: 23°27' 67°49': Archaeological ascent in 1980/81.**Cerro de R-o Negro 6040m: just E.of Volcàn Lascar:**Volcàn Leija (Lausa) † 5793m: 23°33' 67°46':) Archaeological**Chiliques † 5796m:) ascent in 1980.**Miscanti † 5613m:)**N.B.: Leija, Chiliques & Miscanti are near the Argentina-Bolivia border. Miñiques † 5910m: 23° 49' 67°46': Climbers located a rock platform of Inca construction and bundles of firewood in 1972.**Pular † 6225m: 24°15' 68°05': 1-1960. Climbers found remains of Inca altar on top in 1972.**Doña In,s † 5070m: 26°05' 69°10': 1-1937: Inca remains found on top in 1983.*

RGS-IBG Expedition Advisory Centre, 2nd edition, May 1994*Sierra Nevada de Lagunas Bravas (6103m, 6120m?): 26°30' 68°37':**--Cumbre del Laudo 6400m?: 26°31' 68°33': Unclimbed? May be inside Argentina.**Piedra Parada 5920m: 1-1976, but possibly earlier by Indians and/or prospectors.**Juncalito 5680m: 1-1976, but possibly earlier by Indians and/or prospectors.**Macizo Peñas Blancas:**--El Ermitaño 6187m: 1-1967.**--Cerro Boris Kraizel 6000m: eastern peak of massif: 1-1967.**--Don Tiburcio 5980m: 1-1971.**--Centenario 5880m: 1-1971.**--Peña Blanca 6019m: Archaeological ascent in 1985.**Cerro Flamenco 6020m: 1-1971 from a high camp adjacent to 6020m summit of Peñas Blancas.**Cerro Mulas Muertas 5880m: 1-1972?: Traverse S.W. to N.E.-1979.****Region of Ojos del Salado (all on or very near frontier)****Piedras Blancas 6020m: exact location uncertain: 1-1956 by members of Chilean Army.**Nevado San Francisco 6005m: 26°55' 68°17': 1-1913.**Nevado Incahuasi 6601m: 27°03' 68°18': 1-1859?: 2-1913.**Incahuasi Chico (Nevado del Fraile) 5980m: 27°03' 68°23': 1-1956.**Nevado El Muerto 6478m: 27°03' 68°30': 1-1950: Ascent in 1979 via western slope over sand, rubble, blocks and snow.**Cerro Juaro 5700m: first summit on ridge to N.W. of Ojos del Salado: 1-1970.**Cerro Chile-Austria-Alemania 6100m: 1-1979.**Cerro Monval 6060m: 1-1969.**Cerro Lozas 6000m: 1-1979.**Ojos del Salado 6885m: large massif astride the Chile-Argentina frontier with summits in both countries, giving rise to confusion over claims to ascents and heights:**--Cumbre San Martin Norte 27°06'S. 68°32'W.:**--Cumbre Central 27°11'S. 68°35'W.: 1-1937 from S.W.: From SE.-1956: From North-1956: S.face winter ascent-1981: From Refugio Tejos on N.side, traverse to north ('technical') summit-1986.**Cerro 'Radioactivo' 5750m: 1-1969 (2nd party found cairn and details).**Cerro 'Ojitos' 5850m: prominent shoulder N.W. of Ojos del Salado & S.W. of Refugio Andino: 1(probably)-1986.**El Solo 6190m: 27°06'S. 68°44'W.: 1(claimed)-1949: Climbed in 1972. No Inca traces; glaciers found to be covered with volcanic ash.**Cerro Polonia 6030m: vicinity of Tres Cruces: 1-1972.**Nevado de Tres Cruces:**--North peak 6300m: 1-1973.**--Central peak 6620m: 27°05' 68°47': 1-1937.**--South peak 6356m: 27°04' 68°48': 1-1937.**Cerro Puntigudo (Lamas) 5949m: 27°09' 68°49':****South of Ojos del Salado******(a) Frontier peaks****Nevado de los Patos Oeste 5980m: 27°17' 68°50': main summit (6250m) inside Argentina: 1-1965.**Dos Hermanas Norte 5540m: 27°31' 69°00': 1-1885 by Chilean Desert Commission.**Cerro Vidal Gormaz 5100m: 1-1885 by Chilean Desert Commission.**Cerro El Potro † 5830m: 28°22' 68°40': First modern ascent from Argentina-1971; Inca courier's stick found on top.*

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Nevado de los Tumbillos † 5800m: 29°00' 69°46': *Archaeological expedition in 1969, Inca altar on top.*

Cerro El Toro † 6386m: 29°08' 69°47': *Archaeological party found mummy on top in 1964: First modern ascent from Chilean side-1981.*

Cerro Mayra 5300m: *Cordón de los Primos, near Doña Ana: 1-1987? via S.ridge, granite (V+,AI).*

El Toro (north peak) 6280m: *glaciated peak with steep walls falling to east and west: 1-1976: First modern ascent from Chilean side-1981.*

Cerro Proyecto 4724m: *S.of El Toro, at source of Rjo Choapa : 1-1982.*

Cerro de las Tórtolas † 6323m: 29°56' 69°54': *1-1924: Winter ascent-1975.*

Cerro de los Bañados 5340m: 30°05' 69°59':

El Tapado 5124m:) *Climbed in 1978 by large party from the Asociación*

Punta Amarilla 4400m:) *de Andinismo de La Serena. Not necessarily first*

La Hollada 4100m:) *ascents.*

La Moneda 4060m:)

Cerro Olivares (Porongos) 6252m: *1?-1964: S.W.flank-1971. Argentine ascent in 1965 refers to a summit of the mountain inside Argentina.*

Chachacoma 5000m: *Cordillera de la Serena: 1-1954.*

Conconta 5840m: *Olivares (Porongos) group: May be inside Argentina.*

Peaks in the Pastos Largos-Los Tilos valley region, east of La Serena: See AAJ, 23 (1981): 234.

(b) Other peaks

Copiapó (Azufre) † 6072m: 27°16' 69°08': *1(?) -1937: Archaeological ascents-1965,1980,1983.*

Cadillal 5300m: 27°45' 69°22': *1-1884 by Chilean Desert Commission.*

Punilla Este 5364m: *N.W.of Doña Ana: 1-1958.*

Doña Ana † 5690m: *1-1870: Winter ascent 1976.*

Cerro Escabroso 5430m: *1-1958.*

Pasto Salado 4845m, *El Toro* 4300m, *Diablos Parados* 4200m: *1-1974 by schoolboys from La Serena.*

Miscellaneous peaks east of La Serena: See AAJ, 20 (1976): 501.

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Northern Andes of Argentina

(Isolated peaks and massifs east of the main Andean cordillera, which carries the international boundary with Chile. Peaks on the border with Chile are listed under Chile. Groups and peaks are listed from north to south.)

(a) Peaks on the Argentina-Bolivia border (Cordillera de Lipez)

- Cerro Ramada 5540m: 22°12'S. 66°37'W.:)*
Cerro Panizo 5494m:)
Cerro Cuevas 5490m: 22°13'S. 66°39'W.:)
Crucesnioj (El Volcàn) 5504m: 22°13'S. 66°41'W.:)
Cerro Vicuñahuasi 5390m:)
Limitajo 5158m:)
Cerro Panizos 5360m:) 1-1939.
Alcoac 5130m: 22°27'S. 66°48'W.:)
Cerro Bayo 5490m: 22°30'S. 66°55'W.:)
Vilama 5210m: 22°33'S. 66°58'W.:)
Cerro Negro 5680m: 22°33'S. 67°02'W.:)
Cerro Tinte 5860m: 22°39'S. 67°02'W.:)
Cerro Brajma 5350m: 22°44'S. 67°08'W.:)
Sapaleri 5643m: 22°49'S. 67°11'W.: 1-1940.
N.B.: All the above peaks were first climbed by boundary surveyors.

(b) Peaks between Licancabur and Ojos del Salado

- Nevado del Chañi 6060m: 24°06'S. 65°47'W.: rock pyramid: 1-1901: Central spur, N.face-1965: S.face-1982: Solo winter ascent-1985.*
--Chañi Central 6150m: 1?-1984.
--Chañi Este: 1?-1983.
--Chañi Sur: 1-1953.
Chañi Chico 5900m?: 24°06'S. 65°45'W.: 1-1959.
Cerro C.3 5300m: Chañi area: 1-1987, solo.
Cerro C.4 5400m: Chañi area: 2-1987.
Pocitos 5100m: N.W.of Nevado de Pastos Grandes: 2-1985.
Antuco 5800m: 24°16'S. 66°43'W.:)

RGS-IBG Expedition Advisory Centre, 2nd edition, May 1994*Nevados Pastos Grandes:*--*Nevado Quehar* † 6160m: 24°18'S. 66°46'W.:*Cerro Macçn (Icomàn)* † 5490m: 24°28'S 67°16'W: S.S.W.of *Nevado de Pastos Grandes*:
*Archaeological ascent in 1986.**Aràcar* † 6080m: 24°18'S. 67°47'W.: 1-1958.*Nevado del Acay* 5950m: 24°22'S. 66°11'W.: 1-1914.*Cerro Verde* † 5490m: near *Nevado del Acay*: 1-1979.*San Miguel* † c.5400m: steep scree slopes with ice ridge near top: 1-1979.*Cerro Llanaleri* 5300m: 1?-1986.)*Rumibola* 5420m: 1-1985.) Near *La Poma*, *Salta Province*.*Peñas Blancas* 5460m?: 2-1987.)*Nevados de Cachi:*-- *Cerro Blanco (El Libertador)* 6350m: 24°58'S.66°22'W.: 1-1950: via *Cerro de las Arcas*,
completing *Dr.Kuhn's* 1909 route-1987: via *Palermo Oeste*-1987 .--*Cerro Hoygaard* c.6400m: second highest in group: 1?-1987.--*Cerro de las Arcas* 6050m: Unclimbed?--*Cerro de las Olladas* 6120m: central peak of massif: 1-1964: *Archaeological ascent in 1985.*--*Cerro Pellicelli* 6000m: 1-1987.--*Cumbre di Pasquo* 6000m: 1-1987

--P.c.5800-5900m:

Pilar de las Pailas 5900m: W.of *Nevado de Cachi*: 1-1988.*Nevados de Palermo:*--*Cerro Quemado (Cerro de los Honduras?)* 6120m: 24ø48'S 66ø23'W: 1-1979.--*Cerro Cienaga Grande (Ochoquis)* 6030m: Unclimbed?--*Cerro Totorá* 6000m?: Unclimbed?

--P.6070m: Unclimbed?

--*San Miguel de Palermo* 6000m: 1-1985/86 via *Las Paylas (Las Arcas)* & *Canaleta 'Argentina'*.*San Jerçnimo* † 5370m: 1-1979.*Luracatao* 5850m: c.25°10'S 66°45'W: large frozen lake near top of forepeak: 1-1984.*Tebenquincho (Tev-n Grande)* † 5410m: 25°20'S. 67°41'W.: 1-1958.*Antofalla* †6100m?: 25°33'S. 67°56'W.: 1-1954.*Cerro Galàn* † 5570m: 25°55'S. 66°52'W.: 1-pre 1956.*Cerro de la Aguada* 5800m: 25°38'S. 67°53'W.: 1-1904.*Cerro Vallecito* 6120m: 26°13'S. 68°18'W.:*Nevado Cajàn* † 5468m: 26°18'S 66°20'W: Modern pillaging ascents prior to 1984. *Inca remains*
found, mummy probably removed in 1920s.*Cerro El Cçndor (Volcàn Sarmiento)* 6300m: 26°39'S.68°24'W.:*Dos Conos (Dos Conos I)* 5860m: 26°49'□S 68°18'W: 1(?)-1965.*Nevados de Aconquija:*--*Cerro de las Dos Lagunas (Condores)* 5450m: 27°16'S. 66°09'W.: 1-1942.--*Clavillo de Aconquija* 5550m: 27ø20'S. 66°10'W.: 1-1893: Traversed W.- E.-1958: *Ruta Finca Los*
Cerrillos-1985--*Cerro Filo Aspero* 5500m: 1-1958: Traversed W.- E.-1959.--*Nevado Morado* 5900m: 27°13'S. 66°10'W.: 1-1940.--*Pico C.A.T.* 5300m: 1-1959.--*Tipillas* 5400m:--*Cerro de las Cuevas* †5000,4960m: *Archaeological ascent in 1984.*--*Cerro Chimberj* 5350m: 1?-1955.

RGS-IBG Expedition Advisory Centre, 2nd edition, May 1994*--Cerro Tesoro 5500m: 1-1956.***Ojos del Salado region***Cerro de los Arrieros 5601m: 27°09'S. 68°39'W.: 1-1955.**Nevado Walter Penck (Cazadero) 6660m: 27°13'S. 68°35'W.: 1-1970.**P.4650m (Cerro Chango) †: 1-1988.**Nevado Amarillo 6050m: on ridge between Ojos del Salado & Cerro Solo: 1-1970.**Los Perdidos 6300m: on ridge between Ojos del Salado & Cerro Solo: 1-1970.**Aguas Calientes 5517m: 27°14'S. 68°16'W.: 1-1956.**Volcàn del Viento 6010m: 1-1937.**Cerros Nacimiento:**--Nacimiento I:**--Nacimiento II 6460m: 27°17'S. 68°31'W.: N.E.peak of massif: 1-1937.**--Nacimiento V c.6320m: north of Nacimiento I: 1-1988.**Nevado González 6500m: 1-1955.**P.6175m (Cerro Medusa): S.of Nev.del Muerto, above Laguna Medusa: 1?-1986, solo.**P.6050m (Cerro Gendarme Argentino): 10 km S.of Cerro Medusa: 1-1988:**--North summit 5900m: 1?1989.**Volcàn El Peinado † 5740m: 1-1965.**Cerro Bertrand † 5500m: 1-1965.**Morocho II 5420m: 1(?)1-1965.**U/n 5850m: 1-1956 (probably).**Cerro Pabelløn 5740m: 27°45'S. 68°38'W.: E.of Laguna Negra: 1(?)1-1985 by archaeological party.***Peaks south of Ojos del Salado***Nevado de Pissis (Nacimiento de Jagüel): 27°47'S. 68°51'W.:**--P.6779m (possibly 6882m): 1-1937: S.side-1990.**--P.6770m:**--2 other summits?**P.5600m: close to Pissis: 1-1990.**Cerro Vidado 5720m: W.of Nev.Pissis:**Cerro Punilla 5800m: E.of Nev.Pissis:**Nevado Bonete 6412m: 27°55'S. 68°46'W.: 1-1954. Much lower summit reached in 1913 in mist.**N.B.: Pissis and Bonete mark the southern end of the high-level desert of the Puna de Atacama.**Nevado Bonete Chico 6390m: 27°55'S. 68°45'W.: massive, broad summit with five tops: 1-1970.**Nevado de los Patos (Co.Tres Quebradas) 6280m: 27°17'S. 68°52'W.: 1-1937, or probably earlier by local miners.**Veladero 6430m?: 28°03'S. 68°59'W.: (6320m: 27°55'S. 68°56'W.?)**Cerro Mogotes † 5380m: c.28°38'S. 69°35'W.: 1-1971.**Sierra de Sañogasta:**--Nevado Negro Overo †6150m: 28°56'S. 67°51'W.: 1-1941: Mummy discovered on top in 1973.**--Nevado Famatina 6250m: 28°59'S. 67°48'W.: 1-1947.**--Cerro General Manuel Belgrano (Mejicana?) 6250m: 29°02'S. 67°48'W.:**--Nevado Alto Blanco 5800m: 29°04'S. 67°48'W.: 1-1940.**--Nevado de la Mejicana 6100m: 1-1892.**P.5990m: Cordillera de la Ortiga: 29°16'S. 69°42'W.: 1-1969.**Cerro Iman †5467m: E.S.E.of El Toro on A-C border(?): 1-1969: S.E.face-1991.**P.5200m (Colangüil Sur): Cordøn de Colangüil: 29°50'S. 69°37'W.: 1-1961.*

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Cerro Agua Negra 5484m: 1-1964: N.N.E.ridge-1988 #: S.E.ridge-1990.
Cerro Pata de Indio 5205m: remote peak: 1?-1949: S.face, steep ice gully-1988. #
Nevado de Pismanta c.5400m: big unnamed peak at source of Rjo Pismanta: 1-1989 via long, winding E.ridge. #
Nevado de Bauchaceta 5100m, P.5036m: 1-1989 via lower peak & S.E.ridge. #
Cerro Negro Aspero 5500m: 1-1989, quite difficult #: S.E.ridge-1990.
Cerro Natividad 5500m: 1-1990 via ridge from Negro Aspero. #
Cerro Mirador del Olivares 4800m: 1-1989. #
Cordòn de Manrique † 5026m: highest point in range: 1-1959: 2-1990.
Peaks in vicinity of Agua (Alma?) Negra Pass:
Cerro Olivares Norte c.6000m: 7 km W.of Negro Aspero:
Cerro Bifurcaciòn 5223m: 1-1991 from Quebrada de San Lorenzo.
Cerro de la Fortuna 4376m: fine rock pyramid: 1-1991 via N.side.
Olivares (Porongos) massif (several summits over 6000m):
--P.6215m?: 30°20'S. 69°55'W.: 1-1965.
--P.6252 (highest point): 1-1972 by Chileans.
--Cerro Olivares Sur 5850m: 1-1990 via S.ridge.
'Cerro del Pollo' 5500m: S.of Olivares Sur: 1-1990.
P.4400m, P.4600m: Olivares massif: 1-1990.

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