

Wildland Area Extending from Argentina's Nevados de Cachi south to Laguna Blanca

**By Pacific Biodiversity Institute
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Andean Flamingos near Volcán Galán. Image courtesy of Martin Mahr (<http://www.panoramio.com/photo/5845268>).

Background

Pacific Biodiversity Institute has an initiative underway to map roadless areas in South America.

We have mapped a wildland area extending between Nevados de Cachi in the north and Laguna Blanca Natural Reserve in the south. This area extends from the town of San Antonio de los Cobres in the Salta Province south to Hualfin in the Catamarca Province. See the maps in Figures 1 and 2 below.

This large wildland area is primarily located in northwestern Argentina. It is a contiguous area devoid of roads, developments, mines and other significant human alteration of the landscape. The total size of this roadless area is over 2,675,000 hectares. It's big! It does contain some dirt tracks, trails and other routes that are periodically traversed by four-wheel-drive or other all-terrain vehicles. But even these are minimal. We have mapped all the trails and tracks that are easily visible in GoogleEarth.

The wildland area between Nevados de Cachi and Laguna Blanca is bounded by the south-flowing Rio Santa Maria and the north-flowing Rio Calchaquí along the southeastern and northeastern boundaries, respectively. Across the mountain ranges that feed these rivers, the western part of this area is a region of large salt flats and scattered volcanoes, bounded by a north-south trending road that passes through Sierra de Antofagasta and Salar del Hombre Muerte, the latter of which is another roadless area dominated by a very large salt lake.

There are many mountain ranges within this wildland area. One of the highest is Cerro El Libertador (6,380m) in the Sierra de Cachi in the northwest. Other mountain ranges include the Sierra de Pastos Grandes in the northwest tip, the Sierra del Hombre Muerto in the south, and the Sierra de Zuriara in the south central area.

Major rivers include the Rio Luracatao in the north, the Rio Grande o Guasamayo along the east-central edge, and the Rio Colorado in the south. Larger towns occur outside this wildland area primarily along the east boundary. These include La Poma, Palermo Oeste, Payogasta, Cachi, Molinos, Angastaco, San Carlos, Cafayate and Santa Maria on the east and San Antonio at the northern tip.

The wildland area includes two reserves: Reserva Provincial Los Andes in the north and Reserva Natural Provincial Laguna Blanca in the south central part. Species of interest include guanacos, Andean flamingos and cacti.

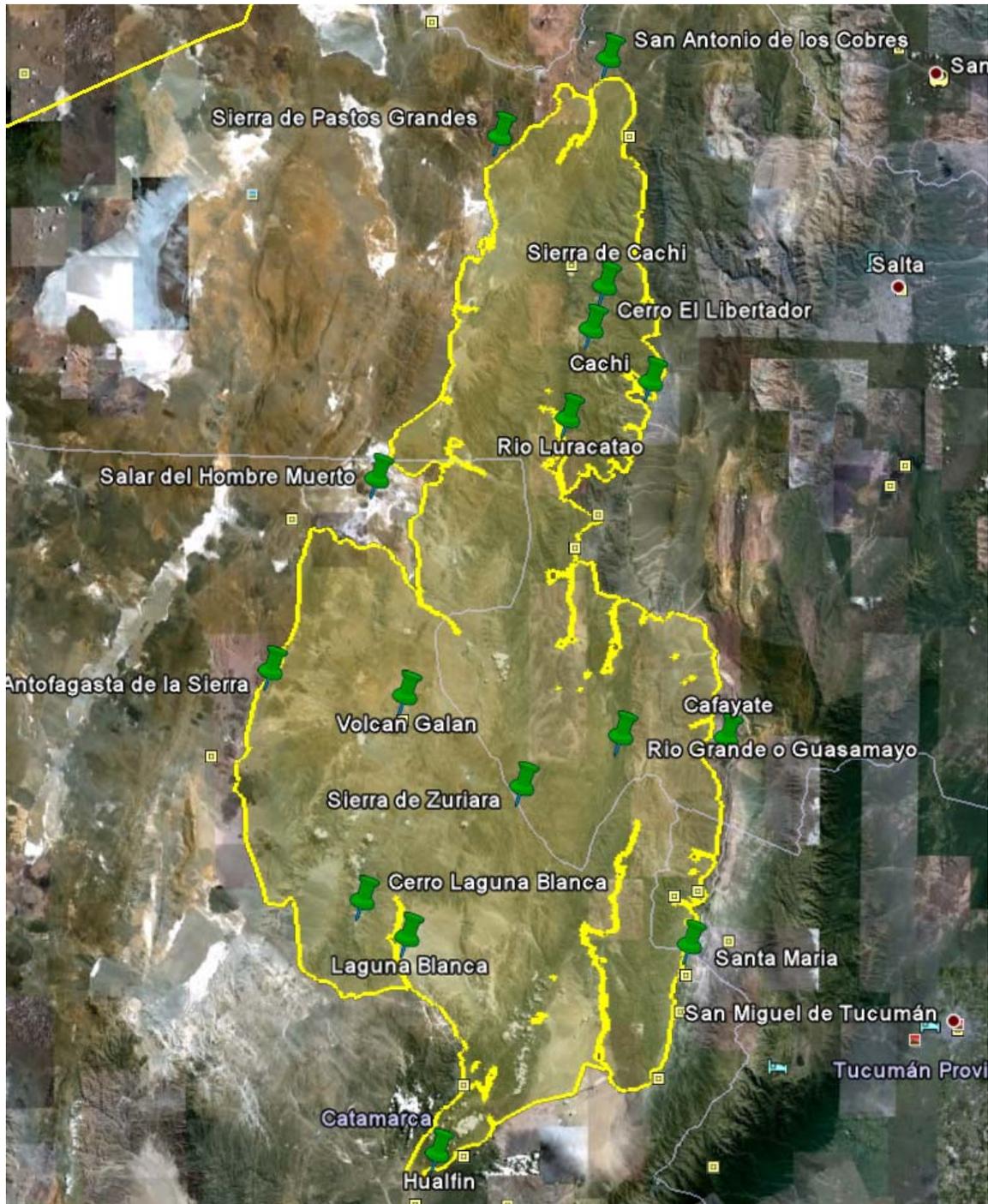


Figure 1. A Google Earth view of the wildland area extending from Nevados de Cachi to Laguna Blanca.

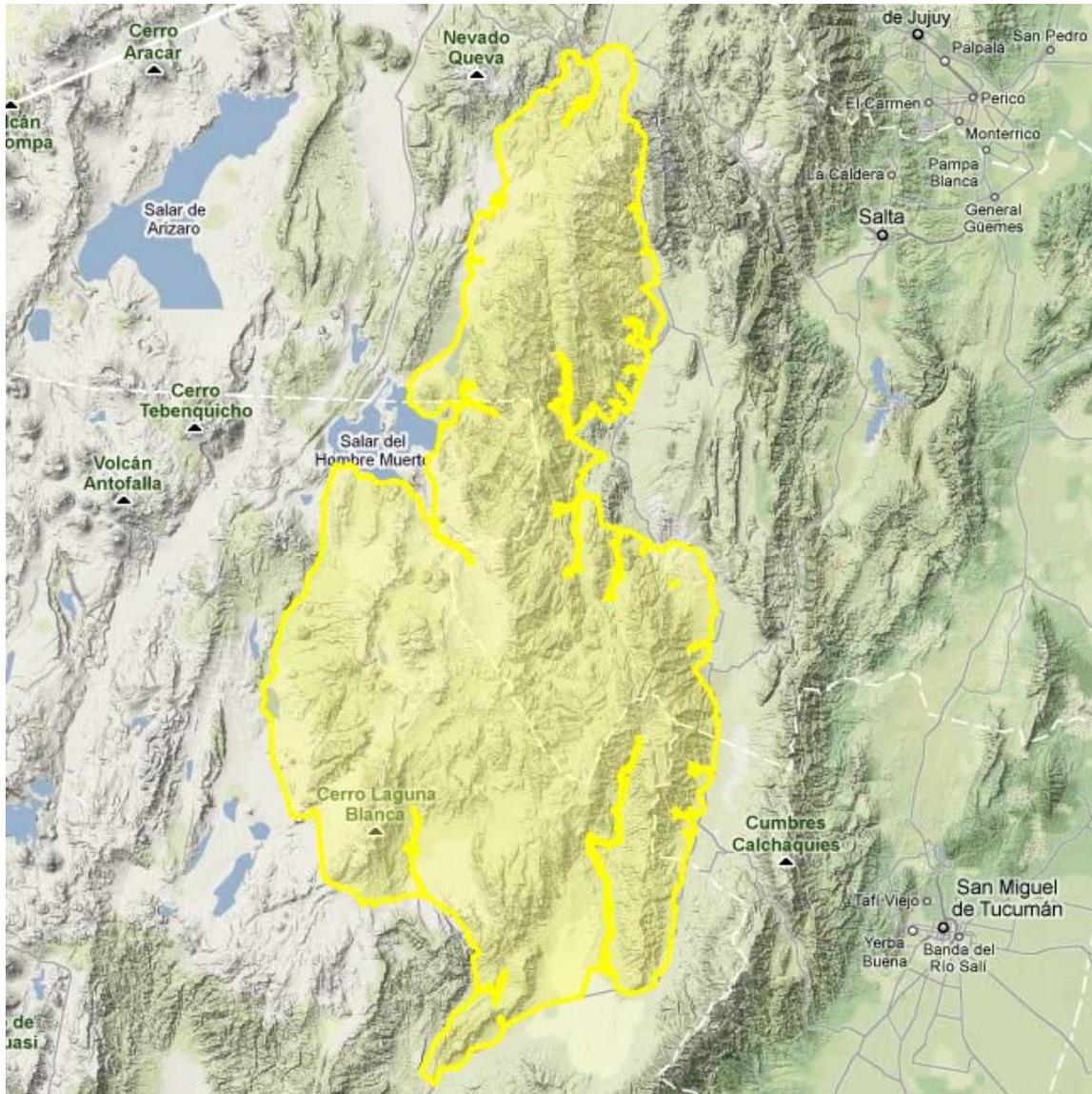


Figure 2. A Google Maps view of the wildland area extending from Nevados de Cachi to Laguna Blanca.

Images of the area

Salar de Pastos Grandes y Sierra de Pastos Grandes

Salar de Pastos Grandes lies at the base of the Sierra de Pastos Grandes at the north end of the area. At the base of the mountains are salt flats containing salt mines, ruins some new mines.

Sierra de Cachi

The Sierra de Cachi lies west of the town of Cachi. Cachi lies along the Valles Calchaquies, which is primarily an agricultural area. The Sierra de Cachi contains Cerro del Libertador (Figure 3).

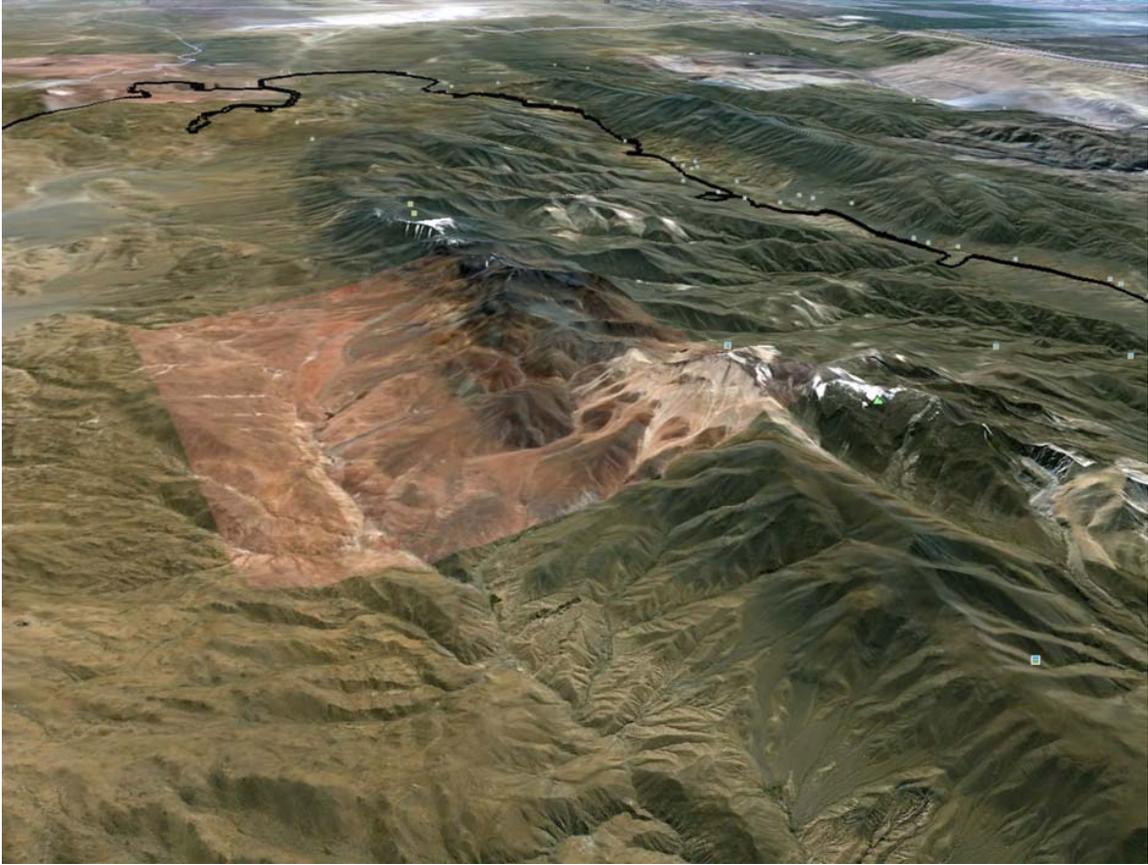


Figure 3. Sierra de Cachi and Cerro el Libertador (center). This is a scan of a Google Earth view of the Sierra de Cachi, looking north (black lines mark the boundary of the roadless area).

Rio Luracatao

East of Molinos, the valley of the Rio Luracatao is an agricultural valley that extends into this wildland area.

Cerro Vicunorco

Cerro Vicunorco is the second-tallest peak in the area (5,249m), lying southeast of Molinos on the crest of Sierra Zuriara (Figure 4).



Figure 4. Estancia COLOMÉ with Cerro Vicunorco in the background. Photo located at courtesy of Alejandro Dieguez (<http://www.panoramio.com/photo/26956479>). Location is at 25.515217S 66.394114W.

Southeast of Cerro Vicunorco is the town of Angastaco and the Rio Angastaco. The area supports a diverse agriculture including grapes and lavender. Field visits to the Cerro Vicunorco area will include visits to potential archaeological sites (Figure 5).

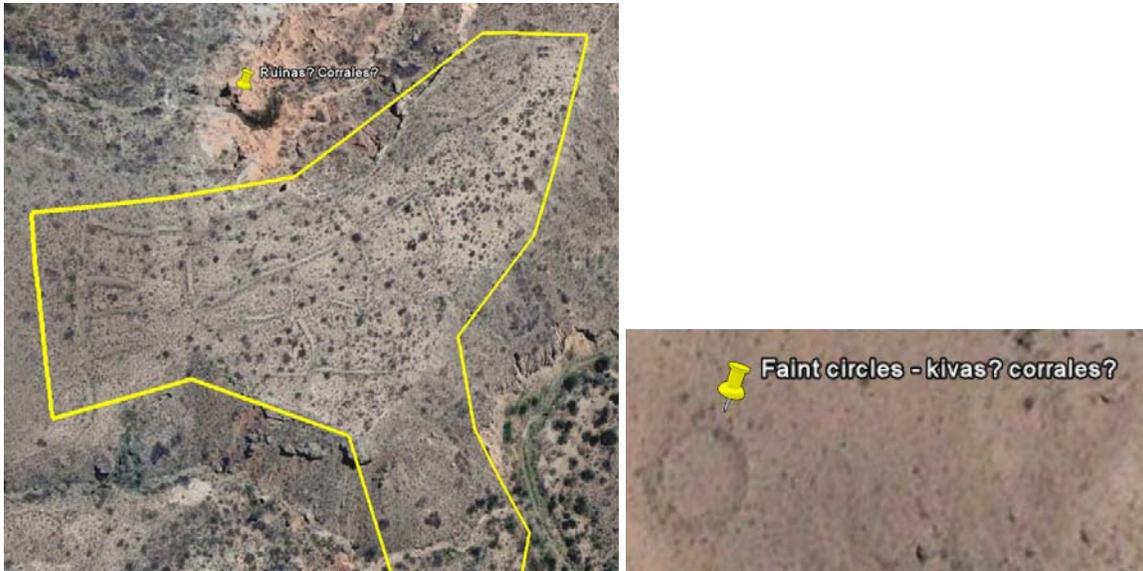


Figure 5. These are scans of Google Earth views, showing corrals or ruins (left) and faint circles that look like kivas or corrales (right).

Rio Colorado

The Rio Colorado flows into the Rio Santa Maria near Cafayate (Figure 6).



Figure 6. The road into Cafayate. Image courtesy of jonahjones (<http://www.panoramio.com/photo/8096049>). The location is at 26.054373S 65.905674W.

Volcán Galán

Volcán Galán lies in the Sierra del Hombre Muerto, east of Cafayate (Figures 7 and 8).



Figure 7. Andean Flamingos near Volcán Galán. Image courtesy of Martin Mahr (<http://www.panoramio.com/photo/5845268>). The location is at 25.891813S 66.835842W.

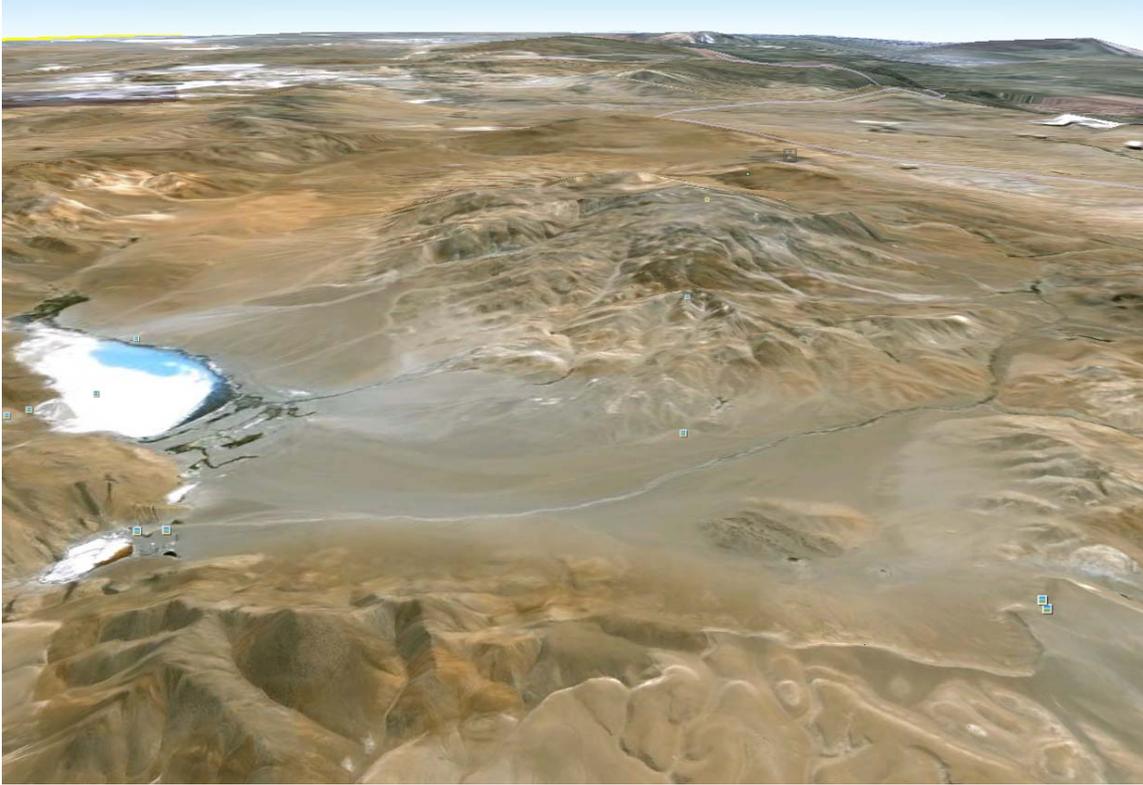


Figure 8. This is a Google Earth scan looking north showing Volcan Galan rising above its huge caldera (>30km across), showing a lake within the crater.

Cerro Tres Rios, east of Volcan Galan toward the Rio Santa Maria

East of Volcan Galan is a broad valley containing a number of small agricultural towns such as Famabalasto. The river valley flows southward and joins the Rio Santa Maria near the south end of the roadless area. Between these two rivers is rugged and seldom-visited area. One of the mountains near the headwaters is named Cerro Tres Rios.

Antofagasta

The Laguna de Antofagasta contains interesting wetlands against a backdrop of dark volcanic flows (Figures 9, 10 and 11).



Figure 9. Laguna de Antofagasta. Image courtesy of Kelly Davico (<http://www.panoramio.com/photo/22583535>). The location is at 26.053390S 67.417259W.



Figure 10. Laguna de Antofagasta. Image courtesy of Kelly Davico (<http://www.panoramio.com/photo/22583708>). The location is at 26.113366S 67.396488W.



Figure 11. Volcanes de Antofagasta. Image courtesy of Leandro Gutierrez (<http://www.panoramio.com/photo/5055170>). The location is 26.157577S 67.428503W.

Laguna Blanca

The Laguna Blanca Reserve contains the peak Cerro Laguna Blanca, at 6012 meters elevation (Figure 12).

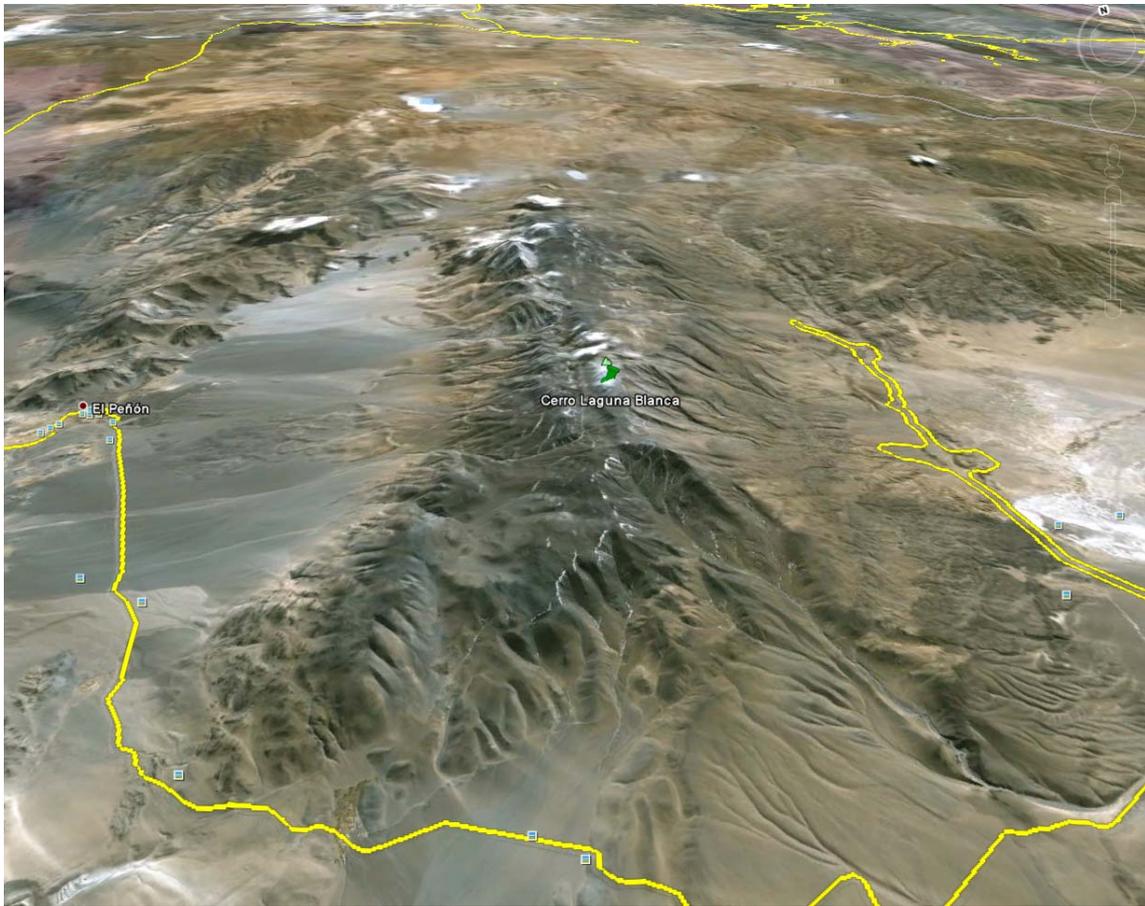


Figure 12. This is a Google Earth scan of Cerro Laguna Blanca, looking northward. The yellow line is the wildland area boundary.

Salar del Hombre Muerto

The Salar del Hombre Muerto is another roadless areas lying along the western boundary of this roadless area. There are old mining roads separating the two areas. The salt flats and lakes extend into both areas. (Figure 13).



Figure 13. Salar del Hombre Muerto. Image courtesy of Saúl Santos Díaz (<http://www.panoramio.com/photo/43542031>, www.santossaul.com and www.portfolionatural.com. The location is 25.484966S 67.074795W.

Wildlife Species in the Nevados de Cachi – Laguna Blanca Wildland Area (Roadless FID 17, size 2,646,550 ha).

Amphibians: *Hypsiboas andinus*, *Hypsiboas riojanus*, *Odontophrynus americanus*, *Pleurodema nebulosum*, *Rhinella spinulosa*.

Reptiles: *Homonota fasciata*, *Liolaemus capillitas*, *Phalotris tricolor*, *Tropidurus torquatus*.

Mammals (Scientific names): *Abrocoma cinerea*, *Abrothrix andinus*, *Abrothrix illuteus*, *Akodon albiventer*, *Akodon boliviensis*, *Akodon lutescens*, *Akodon simulator*, *Akodon spegazzinii*, *Andinomys edax*, *Artibeus jamaicensis*, *Auliscomys sublimis*, *Calomys callosus*, *Calomys musculinus*, *Cavia tschudii*, *Cerdocyon thous*, *Chaetophractus vellerosus*, *Chinchilla chinchilla*, *Conepatus chinga*, *Ctenomys fulvus*, *Ctenomys opimus*, *Ctenomys saltarius*, *Ctenomys tucumanus*, *Desmodus rotundus*, *Didelphis albiventris*, *Dolichotis patagonum*, *Eira barbara*, *Eligmodontia puerulus*, *Eptesicus furinalis*, *Eumops dabbenei*, *Eumops glaucinus*, *Eumops perotis*, *Euphractus sexcinctus*, *Galea musteloides*, *Galictis cuja*, *Graomys domorum*, *Graomys griseoflavus*, *Hippocamelus antisensis*, *Histiopus macrotus*, *Holochilus brasiliensis*, *Lagidium viscacia*, *Lagostomus maximus*, *Lama lama*, *Lasiurus blossevillii*, *Lasiurus cinereus*, *Lasiurus ega*, *Leopardus geoffroyi*, *Leopardus jacobitus*, *Leopardus pajeros*, *Leopardus pardalis*, *Lontra longicaudis*, *Lutreolina crassicaudata*, *Lycalopex culpaeus*, *Lycalopex griseus*, *Lycalopex gymnocercus*, *Lyncodon patagonicus*, *Mazama americana*, *Mazama gouazoubira*, *Microcavia australis*, *Molossops temminckii*, *Molossus molossus*, *Myocastor coypus*, *Myotis albescens*, *Myotis keaysi*, *Myotis levis*, *Myotis nigricans*, *Myotis riparius*, *Nasua nasua*, *Necromys lactens*, *Neotomys ebriosus*, *Nyctinomops macrotis*, *Octodontomys gliroides*, *Oligoryzomys nigripes*, *Oxymycterus paramensis*, *Pecari tajacu*, *Phyllotis osilae*, *Phyllotis xanthopygus*, *Procyon cancrivorus*, *Promops nasutus*, *Puma concolor*, *Sturnira erythromos*, *Sturnira oporaphilum*, *Sylvilagus brasiliensis*, *Tadarida brasiliensis*, *Tapirus terrestris*, *Thylamys pallidior*, *Tolypeutes matacus*, *Vicugna vicugna*.

Mammals (English names): Altiplano Grass Mouse, Andean Altiplano Mouse, Andean Big-eared Mouse, Andean Cat, Andean Gerbil Mouse, Andean Mouse, Andean Pampas Cat, Andean Swamp Rat, Argentine Brown Bat, Argentine Gray Fox, Ashy Chichilla Rat, Big Bonneted Bat, Big Free-tailed Bat, Big-eared Brown Bat, Black Myotis, Black-footed Pygmy Rice Rat, Bolivian Grass Mouse, Brazilian Free-tailed Bat, Brown Mastiff Bat, Brush-tailed Vizcacha Rat, Bunchgrass Leaf-eared Mouse, Collared Peccary, Common Yellow-toothed Cavy, Cougar, Crab-eating Fox, Crab-eating Raccoon, Culpeo, Drylands Vesper Mouse, Dwarf Dog-faced Bat, Geoffroy's Cat, Gray Bocket, Gray Grass Mouse, Gray Leaf-eared Mouse, Gray-bellied Grass Mouse, Greater Bonneted Bat, Guanaco, Hairy Yellow-shouldered Bat, Hairy-legged Myotis, Highland Tucu-tuco, Hoary Bat, Jamaican Fruit-eating Bat, Large Vesper Mouse, Lesser Grison, Lutrine Opossum, Molina's Hog-nosed Skunk, Montane Guinea Pig, Neotropical River Otter, Nutria, Ocelot, Pale Leaf-eared Mouse, Pallas's Mastiff Bat, Pallid Fat-tailed Opossum, Pampas Fox, Paramo Hociendo, Patagonian Cavy, Patagonian Weasel, Peruvian Guemal, Plains Vizcacha, Red Brocket, Riparian Myotis, Rufous-bellied Bolo Mouse, Salta Tucu-tuco, Screaming Hairy Armadillo, Short-tailed Chinchilla, Silver-tipped Myotis, Six-banded Armadillo, South American Coati, South American Tapir, Southern Mountain Cavy, Southern Three-banded Armadillo, Southern Vizcacha, Southern Yellow Bat, Spegazzini's Grass Mouse, Tapeti, Tawny Tucu-tuco, Tayra, Tucuman Tucu-tuco, Vampire Bat, Vicuna, Wagner's Bonneted Bat, Web-footed Marsh Rat, Western Red Bat, White-bellied Grass Mouse, White-eared Opossum, Yellow-rumped Leaf-eared Mouse, Yellow-shouldered Bat, Yellowish Myotis.

Birds (Latin names): *Actitis macularius*, *Aeronautes andecolus*, *Agelasticus thilius*, *Agriornis andicola*, *Agriornis micropterus*, *Agriornis montanus*, *Aimophila strigiceps*, *Anairetes flavirostris*, *Anairetes parulus*, *Anas cyanoptera*, *Anas flavirostris*, *Anas georgica*, *Anas puna*, *Anthus bogotensis*, *Anthus correndera*, *Anthus furcatus*, *Anthus hellmayri*, *Ardea alba*, *Asio flammeus*, *Asthenes modesta*, *Asthenes pyrrholeuca*, *Asthenes sclateri*, *Asthenes steinbachi*, *Athene cunicularia*, *Attagis gayi*, *Bubo virginianus*, *Buteo leucorrhous*, *Buteo nitidus*, *Buteo polyosoma*, *Calidris bairdii*, *Calidris himantopus*, *Calidris melanotos*, *Camptostoma obsoletum*, *Caprimulgus longirostris*, *Caracara plancus*, *Carduelis atrata*, *Carduelis crassirostris*, *Catamenia analis*, *Catamenia inornata*, *Cathartes aura*, *Charadrius alticola*, *Chloephaga melanoptera*, *Chloroceryle americana*, *Cinclodes atacamensis*, *Cinclodes fuscus*, *Circus cinereus*, *Colaptes melanochloros*, *Colaptes rupicola*, *Colibri coruscans*, *Columba livia*, *Columbina picui*, *Coragyps atratus*, *Cranioleuca pyrrhophia*, *Cyanoliseus patagonus*, *Diuca diuca*, *Elaenia albiceps*, *Empidonax alnorum*, *Eudromia elegans*, *Falco femoralis*, *Falco peregrinus*, *Falco sparverius*, *Fulica ardesiaca*, *Fulica cornuta*, *Furnarius rufus*, *Gallinago andina*, *Geositta cunicularia*, *Geositta punensis*, *Geositta rufipennis*, *Geositta tenuirostris*, *Geranoaetus melanoleucus*, *Heliomaster furcifer*, *Heteronetta atricapilla*, *Himantopus mexicanus*, *Hirundinea ferruginea*, *Hirundo rustica*, *Idiopsar brachyurus*, *Larus maculipennis*, *Larus serranus*, *Leptasthenura aegithaloides*, *Leptasthenura fuliginiceps*, *Leptasthenura platensis*, *Lessonia oreas*, *Lophonetta specularioides*, *Metriopelia aymara*, *Metriopelia melanoptera*, *Metriopelia morenoi*, *Mimus dorsalis*, *Mimus patagonicus*, *Molothrus rufoaxillaris*, *Muscisaxicola albilora*, *Muscisaxicola capistratus*, *Muscisaxicola cinereus*, *Muscisaxicola flavinucha*, *Muscisaxicola frontalis*, *Muscisaxicola juninensis*, *Muscisaxicola maculirostris*, *Muscisaxicola rufivertex*, *Myiotheretes striaticollis*, *Netta*

erythrophthalma, Nothoprocta ornata, Nothoprocta pentlandii, Nycticorax nycticorax, Ochthoeca leucophrys, Ochthoeca oenanthoides, Oreopholus ruficollis, Oreotrochilus estella, Oreotrochilus leucopleurus, Oxyura ferruginea, Oxyura vittata, Pachyramphus validus, Pandion haliaetus, Pardirallus sanguinolentus, Passer domesticus, Patagioenas maculosa, Patagona gigas, Petrochelidon pyrrhonota, Phacellodomus maculipectus, Phacellodomus striaticeps, Phaetusa simplex, Phalaropus tricolor, Phalcoboenus megalopterus, Phegornis mitchellii, Pheucticus aureoventris, Phleocryptes melanops, Phoenicoparrus andinus, Phoenicoparrus jamesi, Phoenicopterus chilensis, Phrygilus alaudinus, Phrygilus atriceps, Phrygilus dorsalis, Phrygilus fruticeti, Phrygilus gayi, Phrygilus plebejus, Phrygilus unicolor, Phytotoma rutila, Picumnus cirratus, Pitangus sulphuratus, Plegadis ridgwayi, Pluvialis dominica, Podiceps occipitalis, Polioptila dumicola, Poospiza hypochondria, Poospiza torquata, Pseudocolopteryx acutipennis, Pseudoseisura gutturalis, Psilopsiagon aurifrons, Psilopsiagon aymara, Pterocnemia pennata, Pygochelidon cyanoleuca, Recurvirostra andina, Riparia riparia, Rollandia rolland, Saltator aurantirostris, Scytalopus superciliaris, Serpophaga munda, Serpophaga subcristata, Sicalis lutea, Sicalis olivascens, Sicalis uropygialis, Stigmatura budytoides, Sturnella loyca, Tachycineta meyeri, Teledromas fuscus, Thinocorus orbignyianus, Thinocorus rumicivorus, Thraupis bonariensis, Tinamotis pentlandii, Tringa flavipes, Tringa melanoleuca, Tringa solitaria, Troglodytes aedon, Turdus amaurochalinus, Turdus chiguanco, Turdus nigriceps, Tyto alba, Upucerthia andaecola, Upucerthia certhioides, Upucerthia dumetaria, Upucerthia ruficaudus, Upucerthia validirostris, Vanellus chilensis, Vanellus resplendens, Vultur gryphus, Xolmis coronatus, Zenaida auriculata, Zonotrichia capensis.

Birds (English names): Alder Flycatcher, American Golden-Plover, American Kestrel, Andean Avocet, Andean Condor, Andean Coot, Andean Duck, Andean Flamingo, Andean Flicker, Andean Goose, Andean Gull, Andean Hillstar, Andean Lapwing, Andean Negrito, Andean Slaty-Thrush, Andean Swift, Andean Tinamou, Aplomado Falcon, Ash-breasted Sierra-Finch, Baird's Sandpiper, Band-tailed Seedeater, Band-tailed Sierra-Finch, Band-winged Nightjar, Bank Swallow, Bar-winged Cinclodes, Bare-eyed Ground-Dove, Barn Owl, Barn Swallow, Black Siskin, Black Vulture, Black-backed Grosbeak, Black-billed Shrike-Tyrant, Black-chested Buzzard-Eagle, Black-crowned Monjita, Black-crowned Night-Heron, Black-fronted Ground-Tyrant, Black-headed Duck, Black-hooded Sierra-Finch, Black-necked Stilt, Black-winged Ground-Dove, Blue-and-white Swallow, Blue-and-yellow Tanager, Blue-tufted Starthroat, Bright-rumped Yellow-Finch, Brown-backed Mockingbird, Brown-capped Tit-Spinetail, Brown-hooded Gull, Buff-breasted Earthcreeper, Burrowing Owl, Burrowing Parakeet, Chaco Earthcreeper, Chiguanco Thrush, Chilean Flamingo, Chilean Swallow, Cinereous Ground-Tyrant, Cinereous Harrier, Cinnamon Teal, Cinnamon-bellied Ground-Tyrant, Cliff Flycatcher, Cliff Swallow, Common Diuca-Finch, Common Miner, Cordilleran Canastero, Correndera Pipit, Creamy-bellied Thrush, Crested Becard, Crested Duck, Diademed Sandpiper-Plover, Eared Dove, Elegant Crested-Tinamou, Giant Hummingbird, Golden-billed Saltator, Golden-spotted Ground-Dove, Gray Hawk, Gray-bellied Shrike-Tyrant, Gray-breasted Seedsnipe, Gray-hooded Parakeet, Gray-hooded Sierra-Finch, Great Egret, Great Horned Owl, Great Kiskadee, Greater Wagtail-Tyrant, Greater Yellowlegs, Green Kingfisher, Green-barred Woodpecker, Greenish Yellow-Finch, Hellmayr's Pipit, Horned Coot, House Sparrow, House Wren, James's Flamingo,

Lake Duck, Large-billed Tern, Least Seedsnipe, Lesser Rhea, Lesser Yellowlegs, Long-tailed Meadowlark, Masked Gnatcatcher, Mountain Caracara, Mountain Parakeet, Mourning Sierra-Finch, Ochre-naped Ground-Tyrant, Ornate Tinamou, Osprey, Paramo Pipit, Patagonian Mockingbird, Pectoral Sandpiper, Peregrine Falcon, Picui Ground-Dove, Plain-colored Seedeater, Plain-mantled Tit-Spinetail, Plumbeous Rail, Plumbeous Sierra-Finch, Puna Canastero, Puna Ground-Tyrant, Puna Ibis, Puna Miner, Puna Plover, Puna Snipe, Puna Teal, Puna Tinamou, Puna Yellow-Finch, Red-backed Sierra-Finch, Ringed Warbling-Finch, Rock Earthcreeper, Rock Pigeon, Rufous Hornero, Rufous-banded Miner, Rufous-bellied Seedsnipe, Rufous-collared Sparrow, Rufous-naped Ground-Tyrant, Rufous-sided Warbling-Finch, Sandy Gallito, Scale-throated Earthcreeper, Screaming Cowbird, Sharp-billed Canastero, Short-billed Pipit, Short-eared Owl, Short-tailed Finch, Silvery Grebe, Slender-billed Miner, Solitary Sandpiper, Southern Beardless-Tyrannulet, Southern Caracara, Southern Lapwing, Southern Pochard, Sparkling Violet-ear, Speckled Teal, Spot-billed Ground-Tyrant, Spot-breasted Thornbird, Spot-winged Pigeon, Spotted Sandpiper, Steinbach's Canastero, Stilt Sandpiper, Straight-billed Earthcreeper, Streak-fronted Thornbird, Streak-throated Bush-Tyrant, Stripe-capped Sparrow, Stripe-crowned Spinetail, Subtropical Doradito, Tawny-throated Dotterel, Thick-billed Siskin, Tufted Tit-Spinetail, Tufted Tit-Tyrant, Turkey Vulture, Variable Hawk, White-barred Piculet, White-bellied Tyrannulet, White-browed Chat-Tyrant, White-browed Ground-Tyrant, White-browed Tapaculo, White-crested Elaenia, White-crested Tyrannulet, White-rumped Hawk, White-sided Hillstar, White-tailed Shrike-Tyrant, White-throated Cacholote, White-tipped Plantcutter, White-tufted Grebe, White-winged Cinclodes, Wilson's Phalarope, Wren-like Rushbird, Yellow-billed Pintail, Yellow-billed Tit-Tyrant, Yellow-winged Blackbird, d'Orbigny's Chat-Tyrant.