Southern Chile

Volcanoes & Monkey Puzzles

A Greentours Tour Report

 28^{th} November $1^{st} - 19^{th}$ December 2017

Led by Chris Gardner

Day 128 NovemberTo Punta Arenas

The long haul to Santiago had us all in the country when we needed to be, and then down to the far south. Our car hire queue was definitely the best one to be in, Hertz customers may well have spent the night at the airport! The journey into town was easy and we had a good dinner with an introduction to the delights of pisco sour.

Day 229 NovemberTo Torres del Paine

Once we had sorted some extra fuel we were off and driving across a wide-open landscape of scrub and patches of *Nothofagus antarctica* forest. A section of road ran alongside the coast and we picked up Flying Steamer Duck here. Turning inland a stop by a big pond produced Magellanic Oystercatcher, *Olysinium biflora* and some Crested Ducks. The first Andean Condors were next though they didn't oblige for photos. Dotted across the landscape were many Upland Geese, the brilliant white of the males standing out from a long way away. Some lovely clumps of *Oxalis ennaephylla* were found before we reached Puerto Natales.

Tasty pizzas made a good lunch and then after some picnic shopping (for the coming days) we stopped by the rocky coast with Imperial Cormorants on the pier with juvenile Dolphin Gulls and further along at least six pairs of elegant Black-necked Swans. Taking a back road to the park we stopped in an area of heath with good *Embothrium coccineum* which was colouring some slopes with intense scarlet. Among the scattered bushes were *Cynorchis lessonii* and a few lovely *Chloraea magellanica*, an exquisite grey-green orchid with fine lines akin to cracked porcelain. We checked out a few big ponds which had more Crested Duck and swans, plus a few Chiloe Wigeon. Then there were stops for views of the Paine Massif before arriving at the hotel positioned beneath the famed towers.

Day 330 NovemberLaguna Azul

Our first stop in the morning was by a small waterfall with the scarlet tubes of *Ourisia ruelloides* clinging to the rocks. On the surrounding dry slopes were quite a few *Calceolaria uniflora* many of which has apparently been pecked by Least Seedsnipes (the supposed pollinator, though I personally have never seen this bird anywhere near any *Calceolaria uniflora*). There were also a few diminutive golden flowers of *Alstroemeria patagonica*. Moving on a party of Chilean Flickers

brought us to a halt near a waterfall viewpoint. Whilst searching for these we also saw Yramea Fritillary and Tufted Tit-tyrant. The next area had plentiful Guanacos and whilst we watched one group we became aware that a lone young calf was being roughed up and sat on by a dominant male. It clearly seemed like an attempt to kill the calf, and the poor youngster (which seemed to be separated from its mother) still stayed with the bullying male as it had no other option, and they all seemed to want to kill it! It seemed unlikely it would survive much longer.

At Laguna Azul, the large crescent pond had Crested Ducks, Chiloe Wigeons, Magellanic Oystercatchers, Red-gartered Coots and many Upland Geese. Hidden among the geese was a solitary Ashy-headed Goose (which only came to light with David's keen observation of his photos back in the UK!). Time was spent photographing these before we moved to a dead tree with an American Kestrel in. Driving back up we stopped at a large population of *Calceolaria* with both *biflora* and the natural hybrid *polyrhiza* as well as the deep red-pink daisy *Leuceria rosea*. The weather was improving all the time and the famed towers were slowly revealing themselves. We had lunch in view of these with passing groups of Guanacos providing the perfect foreground. Chilean Satyrs were also about in the sunny grassland.

Driving up to a ridge there were more good Andean Condor views and then a series of ponds on the way back produced Coscoroba swans, a family of Spectacled ducks, both White-tufted and Great Grebes, plus impressive views of various parts of the Paine Massif. A wander around the campsite at Lago Pehoe was productive with a fascinating observation of White-crested Elaenia pollinating *Embothrium coccineum*, Rufous-tailed Plantcutter, Austral Parakeet and exceptionally close views of a Southern Caracara stalking the campground turf.

Day 4 1 December Lago Pehoe to Lago Grey

We made a predawn start to drive out and watch the sunrise of the Torres del Paine. It was cold! Afterwards a short drive to an area with many Guanaco found a couple of Fire-eyed Duicons and we flushed a Magellan Snipe from a marsh, but alas no Pumas! It was a very calm morning and we stopped for White-tufted Grebes nesting among *Scirpus*. A powerful waterfall links two of the parks large lakes, with Lago Nordenskjoll pouring into Lago Pehoe and we visited this cataract. The surrounding area also had many *Chloraea magellanica*, a couple of Austral Canasteros, several Andean Foothills Whites and some wonderful reflections of the impressive Cuernos de Paine. A small pond further on had two Spectacled Ducks and a somewhat shy Plumbeous Rail. We drove on to Lago Grey stopping for a good specimen of *Gavilea littoralis* and admiring the masses of scarlet *Embothrium coccineum* that coloured the nearby slopes.

Time was spent in the tall *Nothofagus antarctica* forest where we found more *Gavilea littoralis*, White-throated Treerunner, Thorn-tail Rayadito and billowing masses of *Lathyrus nervosus*. After a stop at the visitor centre, which provided an explanation of how the park formed we moved on to an area rich in orchids. Here there were many *Chloraea magellanica* and *Gavilea supralabellata* as well as soon good patches of the lovely *Calceolaria uniflora*.

Day 5 2 December Sierra del Toro

Our chance to get into the alpine zone of the far south. It was a stiff walk up towards the ridge past very large domes of Anarthophyllum desideratum some of which were smothered in scarletorange flowers and among them grew the shell-pink *Olsynium junceum*. Reaching a bare rocky area there were many superb Oxalis ennaephylla in various colour forms. The odd Yramea Fritillary was also on the wing. Passing through a delightful stretch of old-growth but nonetheless stunted southern beech we exited on a ridge with plenty of Oreopolus glacialis, and a few of the coppery *Olsynium lyckholmii*. Then through one last belt of trees and we reached the high stony ridge. At first glance, it seemed to offer scant vegetation but closer examination revealed the little domes of Nassauvia lagascae, many more stunning Oxalis eneaphylla and Oreopolus glacialis, the white daisy Leucheria leontopodoides and further along the rocky spine of the ridge was a lone Guanaco, perfectly posed with a truly spectacular mountain and blue lake back drop. In fact, looking around we could see most of the national park in one dramatic sweep in what must be the single most impressive view of the park anywhere with at least four different coloured lakes, the steep ramparts of the Cuernos del Paine and Cerro Paine Grande as well as a vast area beyond. Having seen many grey felted leaves with finished flowers, we crossed over to snow patches where both Hamadryas kingii and delphinii were in flower (attended by some large wingless grasshoppers), the blooms unusual colours from brownish-mustard to near black. Along a streamside were mats of *Caltha sagittata* and we explored these greener areas trying to find birds. I climbed up a small glacier/big snow bed and saw Ochre-naped Ground-tyrant and then I flushed a Rufous-bellied Seedsnipe. Pursuing the bird uphill we managed to track it down and photograph it before it flew off very much like a sandgrouse would. It was an unusually low record for the species (850 metres). A little valley immediately beyond had a few cushions of the lovely creamy-flowered Benthamiella nordenskjoldii.

Beginning our descent, a White-throated Caracara flew in and we had views of it running on the ground. The walk down was through scented slopes of *Oreopolus glacialis* and then across the stony slopes to the shore of Lago Verde. All knees were glad we arrived. There was time for a stop along lake shore where lagre thrombolites lie along the shore and we saw Cinnamon-bellied Ground-tyrant followed by a dead Hairy Armadillo, which would have been an ideal way to round the day off had it been running around!

Day 6 3 December To Santiago

Leaving the park after three productive days we hadn't driven far when we stopped for some very photogenic and tolerant Darwin's Rheas, complete with a backdrop of the Torres del Paine. Then at a lake there were close views of Great Grebes, including some mirrored courting display, as well as Flying Steamer Ducks 'steaming' across the water. It was hard to resist a second stop at Puerto Natales, the water was serene, with the elegant Black-necked Swans reflected in the water. As were the families of Chiloe Wigeon and Crested Ducks, the little chicks scooting across the water. It was ridiculously calm in windy Patagonia! Chilean Flamingos followed feeding in a pool fringed by mud with Baird's Sandipers scuttling about. A low flying Andean Condor tempted us next, at one point landing on a slope, but not staying long.

The plan had been to visit the Magellanic Penguins at Otway Sound, but when we arrived a sign announced it was closed (until it was open again, or so the Spanish read – does that make sense?). Plan B was needed so after a quick lunch we sped across to San Gregorio, a curious sort of place, basically abandoned and falling apart with lots of old buildings from the former boomtime of wool and sheep. However, it was here we found several pairs of Kelp Geese feeding on the sea weed at low tide as vociferous Magellanic Oystercatchers chased about.

We returned to Punta Arenas, fuelled up and arrived in good time at the airport and then onto Santiago for a comfortable night at the Holiday Inn.

Day 74 DecemberTo Siete Tazas

We met with Christine who had just flown in and after a quick pick me up coffee began our drive south, stopping for lunch in a service station. Outside Molino we found the first population of *Alstroemeria ligtu* with a variety of colours from white to orange, though mainly shades of pink. Pure orange stands were a bit further along. Getting closer to Siete Tazas a little patch of open scrub had several orchids with *Chloraea galeata, Chloraea lechleri* and *Chloraea chrysantha* growing with many *Conanthera bifolia* and deep blue *Pasithea coerulea*. Turning onto a little used side road we found drifts of pure white *Nierembergia repens* in a damp flush and then the golden spikes of *Chloraea lamellata* growing close to the scrambling vines of cerise *Bomarea salsilla*. Then it was onto our very pleasant and peaceful hotel set amid tree-filled grounds. A hummingbird feeder in the garden was attracting a Green-backed Firecrown.

Day 8 5 December Siete tazas

The same hummingbird was attending the feeder in the morning as many spider-hunting wasps buzzed about. These seemed incredibly abundant this year and were found just about everywhere we went. Driving into the national park we stopped at waterfall where *Hydrangea serratifolia* sent stout vines into the trees. Inside the park we took a walk into the interesting mixed forests. Before we reached the trees though there were several butterflies that teased but never really settled. Just inside the trees was purple-flowered *Corynabutilon ceratocarpum* and during the course of the walk we also found beetles, various lizards, and Chilean or Four-eyed Painted Lady, before arriving at some substantial *Austrocedrus chilensis*. The habitat had changed and become rockier with an associated change in the flora. Among the rockiest parts were superb flowering barrels of *Eriosyce curvispina*, alongside the dainty pink-pouched *Calceolaria cana*. A handsome green and blue Thin Tree Lizard followed and then the bizarre orchid *Bipinnula apinnula*, with its striking throat patch and unique calli-clustered lip. Another green orchid was next with *Chloraea viridiflora*. Beautiful blue waters thundered over a series of cascades and searching the gravelly ground nearby we found some superb rosettes of *Viola congesta*. A couple of spikes of pink *Schizanthus hookeri* were also tempting to cameras.

We wandered back for a latish lunch and then went to see the big *Puya bertronian* a near the river, which were in full flower. These remarkable bromeliads produce a huge two metre spike with specialist bird perches and masses of turquoise flowers. Three species of bird seemed to be in

attendance with Austral Thrush, White-crested Eleania and Austral Blackbird all keen to get to the plants. Afterwards we visited the siete tazas (seven cups) themselves, a series of lovely pools carved out of the basalt that poured one into the other. Close by were some good *Chloraea lechleri* too.

Day 9 6 December To Antuco

Today we moved further south passing through a largely agricultural landscape at first and then into large areas of pine plantation. It was in one of these that we had our first natural history stop. Surprisingly one of the showiest and certainly one of the tallest orchids we were to see on the tour not only survives but thrives inside such shady plantations. There were many crisp white spikes of *Chloraea crispa* on show, some more than a metre tall. A solitary golden-yellow *Chloraea gavilu* or at least something very like this species was also found, as were a number of emerald-green *Automeris erythraea* caterpillars that seemed to be feeding on the pines and dropping to the ground. A spreadwing skipper and American Painted Lady were seen on a sunny bank near the railway tracks.

Lunch was enjoyed in the shade of the trees before we drove to Salto de Laja, an impressive waterfall where there were also a few lilac *Herbetia lahue* in flower. Then it was on towards the snowy Andes, stopping for an interesting population of orchids with *Chloraea barbata, Chloraea bidentata, Chloraea gaudichaudii* and *Chloraea crispa*. The former two species had also produced an array of hybrids with varying degrees of their parents on show. Nearing our hotel, the imposing bulk of Volcan Antuco rose up, the black cinder cone still heavily draped with snow and a pair of Black-throated Ibises flew across the lava cliffs beyond. We arrived quite early at our cosy cabanas set amidst grounds bursting with non-native intense yellow *Cytisus scoparius*. Closer investigation revealed the scrambling stems of pink flowered *Mutisia ilicifolia* too.

Day 10 7 December Laguna de Laja

Clear blue skies heralded our trip towards the imposing 3585-metre tall Volcan Antuco. Our first stop was for an area of basalt cliffs with the dainty pink *Ourisia microphylla* and bushy *Calceolaria cavanillesii*. The brick-red form of *Salpiglossis sinuata* was also here along with White-throated Treerunner and then down on the sunny ground near the stream several Branded Skippers and a larger Chilean Satyr. Great billowing masses of *Mimulus luteus* hung from the edges of small cascades with *Gunnera tinctoria, Cortaderia chilensis* and *Fuchsia magellanica,* whilst *Mimulus glabrata* crowded the ditches and pools. Moving on we tried for Torrent Duck but no luck and continued uphill, where a turbid pond had Andean Gull, Flying Steamer Duck and Neotropic Cormorant. Near the turquoise Laguna de Laja, the lava scree had wonderful clumps of *Lathyrus multiceps* in places mingled with *Vicia nigricans* as chunky grey Lava Lizards scuttled away. On the slopes above were golden *Senna arnottiana* but an altogether more striking plant awaited with a stunning scarlet *Mimulus cupreus* wedged into the rocks below a seep. We managed to scramble up for a close look as White-sided Hillstar sped past. The latter seemed to be nesting within a small tunnel that led to cliffs with *Calceolaria pennellii* and *Saxifraga magellanica*. Walking back down there was the odd *Nastanthus spathulatus* and Rufous-naped Ground-tyrant.

Lunch was closer to the lake with many *Viola vulcanica* scattered about the cinder. There were even more of these on the slopes above with their showier cousin *Viola cotyledon*, mats of *Maihuenai poeppigii* and *Anemone multifida*. A Brown Hare bolted away but there was little else on the slopes. Driving on we entered a moonscape of lava fields and bare cinder with dramatic hills and the blue waters of the lake. Further away the slopes were clothed in emerald forests a startling contrast to the ground around us. However, within this harse environment there were superb mats of *Maihuenia poeppigii*, the yellow flowers attended by tiny grey bees. There were also some good plants of *Pozoa volcanica* and a small blue butterfly. A look around an area with marshes and mats of *Azorella trifurcata* produced an Andean Negrito as a few *Colias sp* flew about. More scenic views followed as we drove back, also seeing Rufous-naped Ground-tyrant, and then Crested Ducks with a brood before it became beer o'clock on what was a warm sunny day.

Day 11 8 December To Villarica

Our next move south saw us heading first towards the snow-covered cone of Volcan Lliama and then Volcan Villarica. Along the road at one point was a steady procession of well-dressed men (and boys) on sleek horses making their way to a local festival. Indeed, there seemed to be a lot of people on the move today hinting that it must be a national holiday. The traffic to Villarica was slow and this meant a later than planned arrival on the slopes of Villarica National Park. We had lunch near *Embothrium coccineum* with a lovely American Painted Lady settling near us as we ate. Many spider-hunting wasps were also around, two lizards posed on a rock and a Southern Caracara flew into a nearby tree and called loudly. The volcano seemed snowier than usual and when we did drive up to the ski centre it was obvious it had received a lot more than usual. As a result, there were no alpine plants in flower or birds around.

Lower down we did find some fine flowering shrubs of orange *Berberis trigona*, yellow *Berberis montana* and white *Ovidia andina*. Another area had many flowery bushes of *Buddleja globosa*. There was time to visit the bookshop in Pucon before heading onto our quiet hotel in Villarica.

Day 12 9 December Villarica NP

Our first stop just outside Pucon was for a colony of a green and white *Chloraea virescens*. Then it was on through lovely green countryside flanked by rugged hills clothed in forests, continuning until we came across a bank of fiery *Embothrium coccineum*. *Solanum valdivianum* also grew nearby with copious Chilean strawberries *Fragaria chiloensis*. Reaching a lake we were confronted by our first monkey puzzles with some impressive examples to begin our experience of one of the continents most remarkable trees. Setting off on a walk into these old growth forests, we didn't get further than fifty metres as there were some superb sweet-smelling *Gavilea odoratissima* with a few *Chloraea magellanica*. A Chilean Slender Snake then appeared and we had a good look at this as it tried to slip away. Moving on there were some nice red splashes of *Ourisia ruelloides* alongside the stream, drifts of *Viola reichei* and occasional *Berberis darwinii*. A Magellanic Woodpecker flew across at one point, but we couldn't relocate it. By now the *Araucaria araucana* had become more dominant and larger with some venerable specimens, their trunks and spidery branches festooned

with lichen. The bark of these old trees varied from ridges to fantastic hexagonal corky blocks. The trail flattened and we found a population of rich pink *Myostemma* (*Rhodophiala*) andicola. Then in a sunny glade there were many dainty *Pseudolucia plumbea* and a couple of satyrs too. Walking back down we found more butterflies and then a chunky Chilean rose tarantula *Grammostola rosea*.

Lunch was in a grove of more big *Araucaria* in sight of the impressive glacier capped cone of Volcan Lanin. Austral Parakeets whirred about feeding on the male cones of these trees. Another big stand nearby had even better views of the volcano, with some tree trunks almost entirely enveloped in lichen on their windward surfaces to give the appearance of rough fur. There had been a big emergence of cicadas here and we managed to see a few of these settled in the stunted *Nothofagus*. Afterwards we looked around the pleasant marshy fringes of the lake where we saw Speckled Teal and Chiloe Wigeon and then there was a stop for *Calceolaria tennella* and *Azara serrata* and a Thorn-tailed Rayadito revealed its nesthole in a dead tree.

Day 13 10 December Heurquehue and to Puerto Varas

There were clear views of Volcan Villarica as we drove out to the forested hills of Heurquehue. The same lush forests surrounded the pleasant lago and above we could see ridges lined with stands of *Araucaria araucana*. However, before we even left the car park there was a superb plant of *Calceolaria crenatiflora* with many big pouched flowers speckled with red. Walking through the moist forest along the lake side there were more calceolaria and the orange stems of *Luma apiculata*, and a few *Libertia chilensis*, but bird life was quiet. Chilean Pigeon, Chilean Flicker and several Austral Thrushes were feeding in an open field with trees of *Weinmannia trichosperma* in full flower nearby. We took a walk towards the river seeing the mottled bark of *Saxagothaea conspicua*, some immense specimens of *Nothofagus dombeyi* and then a fine flowering plant of *Ourisia coccinea*. There were more good trees and then on the walk back a female Patagonian Sierra-finch and a stand of *Libertia chilensis* with three species of native bees in attendance. Butterflies were strangely very few on such a fine sunny day.

We drove back to the hotel for a quick lunch and then it was onto Puerto Varas, passing stands of orange *Alstroemeria aurea* and enjoying superb views of the perfect snowcone of Volcan Osorno.

Day 14 11 December Alerce Andino

Low cloud had swept in overnight and the scene was very different to yesterday, but somehow appropriate for a region of temperate rain forest. We spent the day in the lush environs of Alerce Andino where our first stop brought the verdance into focus with arching boughs of *Crinodendron hookerianum* dangling with many pink bells, surrounded by copious big-leaved *Gunnera tinctoria*, *Blechnum chilensis* and a general wall of green. The flowers of the former are actually constricted at the tip and this means the pollinating orange *Bombus dahlbohmii* bumblebees had to force their way in. Our first walk inside the park took in a lush tract of forest with a peculiar tumbling moss lining the path and trees plastered with the climbing stems of *Asteranthera ovata* and *Sarmienta repens*. Bamboo was abundant and in one patch we had excellent views of Chucao Tapaculo. Amazing mosses, lichens and the dangling epiphytic stems of white flowered *Luzuriaga radicans* kept us

occupied until we reached the main track. Many more big *Gunnera* lined this and marshy patches had superb bushes of *Crinodendron hookerianum*, sweet cented *Amomyrtus luma*, the lovely tan trunked *Luma apiculata*, abundant *Fuchsia magellanica* festooned with countless hanging flowers and there was the pure white of *Libertia formosa*. The sun was starting to poke through and this seemed to rally the insects with both male and female *Antiagrion grinbergsi* damselflies poised on *Gunnera* leaves. Other odonata were not in the mood to settle. Both Fire-eyed Diucon and Patagonian Tyrant were also seen.

A second walk after lunch went slightly awry at first, but this did bring the bonus of close views of Black-throated Huet-huet. Once on the right track we walked over to Lago Sargazo where many frogs were calling unseen. We did see *Mitraria coccinea, Drimys winteri* and the waxy pink bells of *Philesia magellanica* in flower though. On the return, there was a superb golden spider wasp (*Sphictostethus gravesii*) with peculiar wing-like appendages that it spread out as a threat display. We also saw a nice Emilio's Ground Frog and Four-eyed Lady.

Day 15 12 December Alerce Costero

The ancient Alerce trees were a target of today and one particular tract held the grand daddy of them all. However, we had some difficulty getting on the right road, or at least realizing we were on the right road. This meant we arrived a bit later than planned. Nonetheless, we set off into a remarkable forest with dense stands of Alerce *Fitzroya cupressoides*, the slender rather stunted trees crowed together with a remarkable matrix of roots beneath. They were mingled with the marbled trunks of *Saxagothaea conspicua* swaddled in thick layers of lichen and a dense understorey of bamboo, *Philesia magellanica* and *Gaultheria sp*. At a small stream, we found a Chiloe Ground Frog under a log and then a Chucao Tapaculo came in to have a look giving us super close, clear views. The trail went past a stand of tall dead *Nothofagus nitida* and on one was a male Magellanic Woodpecker. From here the trail descended what seemed like a long way into the lushness, ending at a collosal and magnificent ancient Alerce, claimed to be 3500 years old and four metres in diameter. It was an impressive plant and well worth the effort required to walk back up again. More under-log searching produced another species of frog Cabreria Spiny-chested Frog, a colourful flatworm and an iridescent ground beetle as the whooping call of Black-throated Huethuet echoed around the forest.

By now there was some light rain/drizzle but this didn't last long and had finished by the time we left with stops for *Acrisone yegua, Ourisia coccinea* and then a stuck lorry! Luckily it was towing a big digger and the driver arrived, started the machine up and within a few minutes had whisked his huge vehicle off the back of the low loader swung around and pulled the lorry out of the ditch. All very entertaining. There was also the added bonus of some superb examples of Darwin's bread, a peculiar spherical fungus that parasitizes *Nothofagus*. Back on track we drove on to fine drifts of *Libertia formosa* and then some vivid orange *Alstroemeria aurea* growing in big stands. All that was left was the two hours to Villarica and a decent meal with excellent cold pisco sours.

Day 16 13 December Conguillio NP

The weather Gods had had the morning off and low cloud was slung across the hills as we drove past a placid Lago Villarica and northwards. A stop by a river was productive with Spectacled Ducks, Speckled Teals, several Whimbrel and a little gang of boisterous Dark-bellied Cinclodes. As we watched the river a Ringed Kingfisher flew in and posed well on a wire. Next up was a stand of golden-orange *Alstroemeria aurea* followed by scope views of Spectacled Tyrant, a row of preening Black-throated Ibises perched on fence posts and an obliging photogenic Chimango Caracara. Shortly before arriving at the park there were plenty of *Chloraea virescens* and *Chloraea gaudichaudii*. Inside the park it was a lesson in volcanology with variously aged lava flows and huge stratified ash deposits. The silvery mats of *Rhacometrium* mosses were in various stages of colonisation and islands of emerald forest could be seen surrounded by blackened solidified lava. On the higher ridges were big stands of *Araucaria araucana* swathed in mists. A tranquill blue lake had some interesting reflections and then we reached the first big stands of architectural *Araucaria* draped in copious creamy lichens, a surreal dino-age scene.

After lunch, we took a walk into the amazing tall forest of *Nothofagus dombeyi* and *Araucaria*, with the trees towering forty to fifty metres about us in a remarkable race for the sky. Some trees were immense, the trunks invariably plastered in lichens, with a dense understorey of colourful stemmed bamboo and shrubs such as orange flowered *Berberis trigona* and *Azara serrata*. It was a stunning place and enhanced further by a huge 1800-year old monkey puzzle with a girth of 2.2 metres that towered above. Some of the *Nothofagus* were immense too. From here we drove out past more lava flows and forests and to Angol.

Day 17 14 December Nahuelbuta NP

A winding dirt road led out of Angol and after a few kilometres of plantations we entered wooded farmland with flowery banks. A stop at one with plentiful Calceolaria integrifolia also produced rich-blue Pasithaea coerulea, the large white butterfly Mathania leucothea, a big dragonfly which settled and was then flushed by a Thin Tree Lizard. While all this was going on a Thorn-tailed Rayadito was flying back and forth from its nest hole in the same bank. Reaching the park there was the pink daisy flowers of Mutisia oligodon, a fine clump if Calceolaria valdiviensis and plenty of its cousin Calceolaria corymbosa. the intense scarlet of Rhodophiala chilensis also shone from the bank below a white flowered form of Corynabutilon vitifolium. Our progress was slow into the park with stops for more calceolaria, which grew with Anemone decapetala and then some superb spikes of Gavilea venosa. Another stop for the yellow, orange and red of the parasitic plant Descurania *mutabilis* also turned up a Four-eyed Lady posed on a lichen. The former became more and more common with some superb examples hanging from nothofagus, everything draped in copious Spanish moss. Indeed, Nahuelbuta is an enchanting place and the forests quite otherworldy at times. And nothing reinforces this more than the impressive Araucaria araucana that dominated some areas with their huge spidery whorls, the limbs heavily clad in ghostly lichens. All very Tolkieneqsue. Walking up to the viewpoint at Cerro Anay there were a few butterflies and many Cyan Tree Iguana on the rocks, as well as a spike of golden *Chloraea nudilabia* to welcome us to the top where there were fine views across the park. Among the granite were dense swathes of Fascicularia bicolor a tough native bromeliad. Walking back down we came across a few squabbling

Green-backed Firecrowns, though they never settled for long, and seemed to be arguing over who had rights to the abundant *Desmaria mutabilis* flowers.

Lunch was beneath some immense monkey puzzles and a Striped Woodpecker put in an appearance. Moving on we drove up to another trailhead and walked through a section of very tall *Araucaria* and *Nothofagus dombeyi* to a spectacular viewpoint with commanding views across the park. As we descended there were two superb big *Euathalus vulpinus* tarantulas crawling across the rocks. They had dense golden hairs and reddish abdomens with chevron markings. In fact, we saw more and more of these as we drove out with another five along the road. Then, as we left the park we stopped for a pair of bulls pulling a wooden cart for a touch of traditional Chile.

Day 18 15 December Nahuelbuta & to Vilches

Roadworks interrupted the planned morning a bit, but we still got to see a hybrid swarm of *Chloraea gavilu, Chloraea chrysantha* and *Chloraea longipetala* in somewhat dusty condition. The latter was in perfect form a bit further along and showed itself to be a particularly graceful orchid. An Austral Parakeet perched at length in a nearby tree. The *Chloraea longipetala* grew with a smattering of *Chloraea volkmanii* and these were in abundance in a delightful meadow, which was also busy with insects such as the dragonfly *Erythrodiplax connata* and various butterflies including Fiery Skipper *Hylephila phyleus*. Golden *Linum chamissonis* grew here and there and there were plenty of a pale yellow native daisy.

We drove back to Angol did some important pisco and olive shopping and then began the drive north to Vilches, stopping for lunch at a service station. We arrived with some time to spare so went the few kilometres more to Altos de Lircay in the hope of finding Magellanic Woodpecker. Chilean Flicker was seen on the way, but that was the only woodpecker we saw. However, we had an enjoyable walk through a tract of old growth *Nothofagus dombeyi* woodland. At a dramatic lookout across the forested gorges the rocky slopes had some superb *Puya bertroniana* and *Calceolaria cana* and then back on the main track was more *Salpiglossis sinuata* (red form) and a few *Schizanthus hookeri*.

Day 19 16 December Laguna de Maule

To round off the tour we had two high mountain days. However, a late puncture yesterday meant a delay to get this fixed. Finally, on our way a flock of Burrowing Parrots feeding next to the road brought us to a halt. We had superb views of these colourful birds and followed this up with a few tall *Chloraea incisa*. Moving a bit higher there were masses of *Mutisia oligodon* draped over shrubs festooned with big pale pink flowers. A large phasmid was seen scuttling around one. The flora and volcanic landscapes got better and better as we climbed, reaching areas with many *Caleolaria andina*(?) wedged in rock crevices and wet seeps crowded with *Mimulus luteus*. On the rocky slopes were the charming little purple balls of *Calceolaria arachnoideum* and a third species of paler yellow *Calceolaria*. Dramatic old lava flows could be seen, comprised of either regimented rows or complex swirls of columns. There were bizarre near-white ash columns a bit higher up and then we reached the vast expanse of Laguna de Maule. It was windy up here but we found a (slightly) less exposed spot down among a stunning colony of hundreds of flowering *Viola cotyledon*. The purple carpet gave way to swathes of *Oxalis adenophylla* in places, speckled with creamy *Olsynium frigidum*. There was considerable variation in violet colour form white to lilac to deep purple and it was a beguiling scene with spectacular mountain landscapes all around. Occasional snake-like stems of *Nassauvia revoluta* sprawled across the ground too. Seeking calmer conditions, we drove on to a sheltered valley. Here the slopes were coloured with yellow *Calceolaria corymbosa* ssp. *floccosa*, whilst *Calceolaria volkmannii* grew on the rocks and *Calceolaria filicaulis* in the marshy flushes alongside the intense scarlet trumpets of *Mimulus cupreus*. A bubbly call and then suddenly a pair of Grey-breasted Seedsnipes scuttled out and across the road, posing well for photos. There was time to find *Viola glacialis* before we started back, stopping for views, Greater Yellowfinches and then a hot drink at a café where Upland Geese, Yellow-billed Pintail and Patagonian Sierra-finch were seen.

Descending there were stops for fine stands of *Schizanthus hookerii* (growing with a *Leucheria sp*) and domes of *Vicia magnifolia* smothered in ivory flowers with some amazing landscapes beyond. *Alstroemeria ligtu* ssp *incarnata* was also positioned well in this way, as favourable light played across the landscape. We saw the Burrowing Parrots again as we drove onto the Ruta 5 for the whizz north to Curico.

Day 20 17 December Paso Vergara

A grand finale and an eventful day. Leaving Curico we took the road west stopping first for rocky slopes with magenta *Cistanthe cabrerae* and the deep blue tubes of *Puya coerulea*. Burrowing Parrots posed well in a tree for a while and then we stopped for the lovely *Mimulus naiandinus* along a stream. Then in the main river, standing on a mid-stream boulder we spotted the first Torrent Duck, a very dapper male, who was busy preening. We photographed him for a while before he flew off downstream. Gaining height, we saw *Famatina andina* and then more Torrent Ducks with a pair even closer than the last bird. We could also see them swimming against the flow as they searched for food and we had superb views. A bit further on a big stand of *Alstroemeria ligtu* subsp. *incarnata* brought us to a halt, colouring a slope pink with great swaths of yellow *Calceolaria thyrsiflora* for vivid company. This was a mere introduction for as we drove up higher the display gathered momentum and we had simply stunning mountain views with great sweeps of colour extending across the slopes and up and down.

New plants appeared as we wrenched ourselves from these irresistable displays and walked higher to rocks with big billowing masses of different *Calceolaria spp* and barrels of *Eriosyce curvispina* with large pinkish-orange to greenish flowers. The first stands of red-pink and gold *Schizanthus grahamii* appeared but we ignored these for now, pushing on higher along the rough track and eventually stopping amidst the grand landscape of remarkable stratified rocks the dry slopes punctuated with bright green flushes. The latter were in turn embellished with sweeps of snow white *Callandrinia affinis* and the yellow 'balloons' of *Caleolaria filicaulis*. The drier slopes had plenty of the neat rosettes of *Viola congesta*. We eventually reached a view of the lake from where we turned back stopping for more displays of *Callandrinia affinis*, where David also saw Grey-

breasted Seedsnipes, then again for the purple 'balloons' of *Calceolaria arachnoideum* and finally the stunning spikes of *Schzanthus grahamii*. A number of chunky lizards were seen throughout.

It had been a stunning show, but time was moving on so we began our final drive down and onto Santiago, not really stopping until forced to by a puncture! Wheel changed we headed on to Santiago and arrived in time for a final good meal and pisco sour.

Day 21 18 December Flights

Flights took off and landed okay, except for mine which was delayed by 15 hours because of a strike in Argentina. I certainly won't cry for you now!

Day 22 19 December Arrival

Systematic List 1 Flora

The list comprises principally the native species with only the most obvious alien species included as so many Eurasian 'weeds' are widespread in lowland Chile and these do not seem particularly relevant. Species in parentheses [] were seen on previous trips and are included for completeness although they were not seen during tour. There have been a number of identification revisions please check the list carefully.

Lycopodiaceae Lycopodium magellanicum	Torres del Paine	
Pteridophytes		
Adiantaceae		
Adiantum spp	Various species encountered.	
Aspidiaceae		
Polystichum spp	Various species seen, especially at Alerce Andino, also Nahuelbuta	
Polystichum andinum	Among vegetation patches on the cinder slopes of Volcan Antuco	
Aspleniaceae		
Asplenium sp	A species seen similar to 'Black Spleenwort'	
Azolaceae		
Azolla filiculoides	Freshwater pools	
Blechnaceae		
Blechnum chilense (magellanicum)	The common large fern with once pinnate leaves, abundant in wet areas. A second similar species was seen at Alerce Costanera	
Blechnum penna-marinum	Widespread small fern	
Cheilanthes sp	Antucalhue	
Cyathaceae		
Cyathea sp	Alerce Andino - a 'trunkless' tree fern.	
Gleicheniaceae		
Gleichenia quadripartita	Alerce Andino, Alerce Costero, bifurcate leaves	
Hymenophyllaceae		
Hymenophyllum spp	Several species at Alerce Andino with dense coverings on many trees and logs	

Gymnosperms Araucariaceae

Araucaria araucana

Cupressaceae

Austrocedrus chilensis Fitzroya cupressoides

Pilgerodendron uviferum

Podocarpaceae

Podocarpus nubigena Podocarpus salignus Prumnopitys andina Saxe-gothaea conspicua

Angiosperms - Dicotyledons Acanthaceae

[Stenandrium dulce

Cissus striata

Apiaceae

Apium prostrata Azorella monantha Azorella monteroi Azorella sp

Azorella trifurcata Eryngium pandanifolium

Foeniculum vulgare Mulinium spinosum Osmorhiza chilense Pozoa volcanica

Sanicula graveolens

Araliaceae

Pseudopanax valdiviensis Pseudopanax laetivirens

Asteraceae

Magnificent forests at Nahuelbuta, Conguillio and Villarica

Siete Tazas, Laguna del Laja, Paso Vergara Alerce Andino, Alerce Costero; relative of redwoods with a huge specimen at Alerce Costero (2013) Alerce Andino – similar to *Fitzroya*

Typical podocarp, Alerce Andino Graceful long-leaved conifer, a few below Nahuelbuta (2013) Somewhat 'yew-like' with berry-like fruits (2013) Similar to *Prumnopitys* but spinier and cone-like fruits and characteristic mauvish-grey scaled bark. Alerce Costero, Heurquehue

Low growing pink flower, near Siete Tazas 2010]

Palmate leaved climber, scattered in north

Torres del Paine Paso Vergara, hard spreading mats, also Torres del Paine. Distinct pointed leaves, Siete Tazas Looser sprawling mats with tight rosettes of rounded leaves, Altos de Lircay Torres del Paine, three part pointed leaves Widespread, rosette of long soft-spined leaves and tall spinybracted flowers Common alien weed Abundant spiny domed shrub, Torres del Paine Unexciting small-flowered umbellifer, Torres del Paine Unusual leaved species in cinder at Siete Tazas, Laguna de Laja Low growing yellow flowered alpine forms at Paso Vergara, Laguna de Maule, taller at lower altitudes e.g. Nahuelbuta

Widespread in wetter forests Widespread in wetter forests

Acrisione denticulata

Adenocaulon chilense

Antennaria chilensis Symphyotrichum (= Aster) vahlii Baccharis magellanica Baccharis sp Chilotrichum diffusum Cichorum intybus Cotula scariosa

Erigeron leptopetalus Erigeron patagonicus Gamochaeta nivalis Grindelia prunelloides Haplopappus baylahuen

Haplopappus macrocephalus Haplopappus spp Hypochaeris incana

Leucheria glacialis Leucheria hahnii

Leucheria leontopodoides Leucheria purpurea

Leucheria rosea/paniculata [*Mutisia cana*

Mutisia decurrens Mutisia ilicifolia

Mutisia oligodon

Mutisia spinosa

Nardophyllum bryoides

Nassauvia fuegiana Nassauvia lagascae

Nassauvia magellanica Nassauvia pygmaea Large yellow flowered shrub at Alerce Andino and Alerce Costero Small pinkish flowers, rosette of oval leaves silver on the reverse, Nahuelbuta, Torres del Paine Torres del Paine Common white daisy in marshy areas at Torres del Paine Common in the far south Various species seen, all similar in flower Abundant white flowered shrub in far south Abundant roadside weed Pinnate leaves, yellow flowers, low-growing spreading herb, Alerce Andino, Torres del Paine Torres del Paine, Serra del Toro Torres del Paine, hairy Widespread in meadows and roadsides Mat-forming with yellow daisy flowers, Laguna de Laja. Possibly this bushy species (in seed) on rocks and rocky ground en route to Paso Vergara Reddish-orange daisy near Siete Tazas Various other species seen Honey-scented white flowers, prominent brown styles, far south. White, branched daisy at Paso Vergara Pretty sweet-scented white daisy in heath near Puerto Natales, entire tomentose leaves. Pink flowered form on Sierra del Toro. White flowered daisy with grey leaves Sierra del Toro. Lovely deep-reddish purple flowered daisy at Torres del Paine White form – possibly this at Siete Tazas One in fine flower at Siete Tazas, orange-red, near roadside 2011] Leaves at Siete Tazas A (whitish to) pink species en route to Nahuelbuta, only small or non-existent point to phyllaries. Possibly also en route to Laguna del Maule road, Paso Vergara, but calyx seems too spiny so these are probably spinosa. Pink to white flowered species at Laguna del Laja, Laguna de Maule. Leaf margin entire. Possibly this species en route to Laguna de Maule and Paso Vergara, the calyx certainly had pronounced 'points' to the overlapping phyllaries. Very similar in other respects to ilicifolia. Attractive apricot-flowers in spreading cushions Torres del Paine Torres del Paine, sprawling mats, small flower clusters Villarica ski-centre, also Paso Vergara. Tight overlapping leaves, broad umbels of flower. Var, globosa at Sierra del Toro. Torres del Paine, shingle beach near Grey Serra del Toro

Nassauvia revoluta Pachylaena aptriplicifolia

Perezia magellanica Perezia recurvata Podanthus mitiqui/ovatifolius

Senecio argyreus Senecio bipontinii Senecio chionophylus Senecio clarionifolius

Senecio magellanicus Senecio chilensis

Senecio smithii

Senecio sp [Senecio tricuspidatus Senecio vaginatus Tragopogon pratensis Viguiera revoluta

Berberidaceae

Berberis montana

Berberis darwinii

Berberis empetrifolia

Berberis microphylla [Berberis negeriana Berberis serratodentata

Berberis trigona

Bignoniaceae

Campsidium valdivianum

Boraginaceae

Cynoglossum creticum Phacelia secundum Almost in flower at Laguna de Maule Stunning creamy-daisies set among fleshy rosettes, Paso Vergara – not quite flowering 2015 White flowers, pinnate leaves, Torres del Paine Sky-blue to white flowers in mats, far south Shrub with round yellowish inflorescences akin to Buddleja globosa. Siete Tazas Cinder fields at Conguillio On cinder at Laguna de Laja not flowering 2015 Conguillio (2013) Possibly this along the roadside at Villarica, spreading mats with tomentose leaves, pale yellow flowers (2013) Possibly this at Torres del Paine (2013) Yellow with grey tomentose leaves, Siete Tazas (2010), Laguna de Laja, Laguna de Maule, Paso Vergara In bud at Torres del Paine, large somewhat woolly leaves and white flowers. (2013) Various species seen! Ottway Sound (2010)] Serra del Toro Siete Tazas - non-native Tall yellow daisy along roadsides below Paso Vergara

Large (for Berberis) yellow flowers, rounded leaves, Nahuelbuta, Villarica. B buxifolia is now incorporated in this species. B. microphylla is similar and common in the far south Fine shrub, small holly-like leaves, golden-yellow flowers widespread in Araucania e.g. Nahuelbuta, Alerce Costero (Conguillio, Heuquehue, Villarica 2013) Narrow leaves and yellow flowers, small bush, abundant at Laguna del Laja on cinder, also Altos de Lircay, Villarica, Paso Vergara generally at altitude except in Torres del Paine Torres del Paine - local name is Calafate Villarica (Puesco), large leaves some spines] Villarica (Puesco) – large glossy leaves with spines along margins, (yellow-apricot flowers but none this year) Spectacular orange flowered shrub, Nahuelbuta, Villarica. Previously known as linearifolia

Red tubular flowers on climbing stems, Heurquehue, Alerce Andino, Alerce Costero

Scattered. Alien weed Common native borage e.g. Siete Tazas, Paso Vergara where superb mauve forms Many ruderal aliens species seen

Brassicaceae

Brassica rapae Capsella bursa-pastoris Cochlearia Draba gillesii Noccaea magellanica Onuris spegazziniana

Cactaceae

Echinopsis chilensis Eriosyce curvispina

Maihuenia poeppigii

Calceolariaceae

Calceolaria arachniodea Calceolaria biflora

Calceolaria cana Calceolaria cavanillesii

Calceolaria corymbosa Calceolaria corymbosa ssp flocosa

Calceolaria crenatiflora

Calceolaria dentata

Calceolaria filicaulis

Calceolaria hypericina/segethii

Calceolaria integrifolia

Calceolaria meyeniana

Calceolaria paralia

Calceolaria pennellii

Calceolaria polifolia

Calceolaria polyrhiza Calceolaria spp Calceolaria tenella Alien. Torres del Paine Widespread alien Puerto Natales Possibly this at Serra del Toro Torres del Paine Possibly this in steppe en route to Puerto Natales, growing with Oxalis enneaphylla

Stands on slopes south of Santiago Fine globular cactus with yellow-pink flowers at Siete Tazas, also Paso Vergara road Wonderful mat-forming cactus with pale yellow flowers Laguna del Laja

Around a third of Chile's 75 calceolaria species were seen during the tour, with a few unknowns thrown in.

In leaf/bud at Paso Vergara Variable, but flat green oval basal leaves and tall stems of yellow flowers common at Torres del Paine. Lovely pink species, grey leaves and long-stemmed infl. Yellow species, slightly serrate leaves, with prominent bract below inflorescence, on cliffs with Ourisia microphylla and various rocky areas at Laguna del Laja Nahuelbuta, lovely showy masses this year Paso Vergara, Laguna de Maule. Red speckled pouches and grey floccose leaves. Laguna de Laja Large pouched yellow species with red markings, on wet rocks at Heurquehue and also Villarica (2013) Tall, corymbose species growing with Chloraea lamellata, flowers somewhat flattened, soft yellow. Paso Vergara in wet turf, round inflated pouches and rest of flower reduced Large bushes on slopes at PasoVergara, golden yellow, slim flowers Locally abundant bushy species, especially en route to Nahuelbuta. Dense infl with bright yellow spotless flowers The common bushy yellow woodland species at (Altos de Licay), Siete Tazas Tall species, with large inflorescence of smooth soft yellow pouches, by a stream at Paso Vergara Rocky slopes at Laguna de Laja, also Laguna de Maule, short dense clumps. Originally called as volkmannii. Possibly this grey leaves species at Laguna del Laja 2011 and Laguna de Maule road this year. Torres del Paine, hybridising with uniflora Other species seen but not identified Small yellow species in wet seeps at Villarica

Calceolaria thrysiflora Calceolaria uniflora

Calceolaria uniflora x polyrhiza Calceolaria valdiviana

Caliceraceae

Moschopsis rosulata Nastanthus scapigerus

Caryophyllaceae

Cerastium arvense Cerastium montioides Silene chilensis Silene magellanica Stellaria debilis

Celastraceae Maytenus magellanicum

Convolvulaceae Convolvulus chilensis

Cunoniaceae Caldcluvia paniculata Weinmannia trichosperma

Desfontainiaceae Desfontainea spinosa

Eleocarpaceae Crinodendron hookerianum

Empetraceae Empetrum rubrum

Ephedraceae Ephedra chilensis

Ericaceae

Gaultheria insana

Near Siete Tazas, Paso Vergara Stunning large flowers of orange-brown to golden with red and white lip, locally common at Torres del Paine. Hybrids at TDP Bright yellow flowers with flattened, indented pouches, Villarica, Nahuelbuta, Conguillio and Heurquehue.

Sierra del Toro. Squashed broccoli! Unusual rosettes of glaucous leaves with dense flowerheads, Laguna del Laja

Widespread in woods, steppe Siete Tazas, Laguna de Laja Possibly this at Paso Vergara Torres del Paine Torres del Paine

Torres del Paine, Grey

Roadsides

Everygreen shrub at Heurquehue Impressive flowering trees at Villarica, Alerce Costanera, dense spikes of creamy flowers

Scattered Nahuelbuta, Alerce Andino, Alerce Costanera, but none in flower

Superb stands at Alerce Andino, crimson lanterns aplenty

Locally abundant in heaths of far south + north alpine zone

Typical Ephedra, leafless green stems, Laguna del Laja

Gaultheria proved a confusing genus and many specimens not determined! However, there probably only two or three variable taxa involved. Alerce Andino, Villarica altogether larger and longer leaves Gaultheria mucronata

Gaultheria poeppigii

Gaultheria pumila

Escalloniaceae

Escallonia rubra

Escallonia paniculata

Escallonia alpina

Eucryphiaceae

Eucryphia cordifolia

Euphorbiaceae

Euphorbia collina

Fabaceae

[Adesmia aspera/radicifolia Adesmia boronioides Adesmia campestris Adesmia corymbosa Ademsoa longipes Adesmia longiseta

Adesmia lotoides Sdemsia microphylla Adesmia pumila

Adesmia sp Anarthophyllum desideratum

Anarthophyllum andicola Astragalus palenae Astragalus pehuenches

Cytisus scoparius

Galego officianalis Lathyrus magellanicus Near Nahuelbuta, also Villarica, Torres del Paine, widespread, common and variable, some densely-flowering bushes at Villarica Widespread small shrub, common in forest at Siete Tazas and Altos de Lircay, Villarica, longer leaves than *mucronata* Very dwarf, leaves without spines, bells not constricted at distal end. Torres del Paine, but probably seen elsewhere

Siete Tazas, Villarica, superb bushes at Torres del Paine, redpink Unexciting shrub with dense panicles of white flowers, near Nahuelbuta

Pale pink or white, Torres del Paine

Common large shrub to huge tree at Alerce Andino, non-flowering

Common especially in cinder on Volcan Antuco, also Villarica

There is some confusion with *Lathyrus* with conflicting illustrations in the Hoffmann series of books and other publications. I defer to Hoffmann which offers the clearest distinctions 2011] Abundant bushy species at Torres del Paine TDP, spiny shrublet at Lago Sarmiento Fine species in rocky cinder at pass, Altos de Lircay (2013) Possibly this at Volcan Antuco Relatively large-flowered species in meadow near Nahuelbuta Dwarf species at Torres del Paine, non hairy Paso Vergara Similar to lotoides but pinnate leaflets and hairy, Torres del Paine Confusing and difficult genus, many species seen Superb displays in places at Torres del Paine and Sierra del Toro. Golden yellow species, in bud at Paso Vergara (2013) Pretty pinkish species at Torres del Paine (2010) Abundant at Paso Vergara, greatly inflated seedpods on the ends of stems, some with purplish flowers too Common alien shrub, spectacular displays at Laguna del Laja, Villarica Widespread alien Purplish and pale lilac-white 'sweet pea' scrambling in woods and roadsides in Torres del Paine. Noticeably smaller

Lathyrus multiceps

Lathyrus nervosus

Lathyrus subandinus

Lupinus arboreus Lupinus microcarpus

Lupinus nookatensis Senna arnottiana

Sophora macrocarpa

Teline monspessulanus Vicia diffusum Vicia magellanica Vicia magnifolia

Vicia nigricans

Fagaceae

Nothofagus alpina [Nothofagus alexandrina Nothofagus antarctica Nothofagus betuloides Nothofagus dombeyi Nothofagus glauca Nothofagus nitida

Nothofagus obliqua Nothofagus pumilo

Flacourtiaceae

Azara lanceolata Azara microphylla Azara petiolaris Azara serrata

Geraniaceae

Cissarabyron elegans

Erodium cicutarium

flowered, with more slender leaves than nervosus. Further north it is pure purplish-magenta and much lusher scrambling into trees at Siete Tazas, becoming bicoloured again further south at Nahuelbuta. Common and widespread, large bicoloured purple and white flowers, large squarish standards and wide keels. Laguna del Laja. Fine large flowered oval-leaved species at Torres del Paine. Larger flowered than *magellanicus*. Smaller, narrower flowers than multiceps, bicoloured rosewhite, Altos de Lircay (2010) Abundant alien, common near coasts Pinkish-purple small lupin on beach at Boca Budi 2010, near Nahuelbuta 2011 Colourful alien! Too common at Torres del Paine Prostrate species with big golden flowers on slopes at Laguna del Laja, Paso Vergara, Laguna de Maule. Scattered, yellow flowered shrub, pinnate leaves, Altos de Lircay, Conguillio Alien shrub, Laguna del Laja, Nahuelbuta Far south, small mauve flowers on scrambling plants Torres del Paine Large creamy vetch common at Altos de Lircay, also Siete Tazas, Maule, Vergara Laguna de Laja, Villarica, Conguillio, handsome deep pink vetch

Long leaved species at Conguillio, Villarica Los Ruiles 2011] Abundant in windblown steppe of south Near Cueva de Milodon, bronzy tint to leaves Common small dark green leaved species, some huge trees Widespread, Siete Tazas, Villarica Alerce Andino, triangular, rigid, glossy leaves, new growth a lovely rusty colour Common oval-leaved mid-green species at Nahuelbuta Conguillio, Heurquehue, Torres del Paine, etc

Nahuelbuta, slender leaves (2013) Shrubberies in Lake District, small roundish leaves (2013) Altos de Lircay (2013) Oval serrate leaves, yellow flowers; Heurquehue, Villarica, Conguillio

Siete Tazas, pink with purple veins, woodland, flower rather like an oxalis TDP Geranium magellanicum Geranium sessiliflorum

Gesneriaceae Asteranthera ovata

Mitraria coccinea

Sarmienta scandens

Gunneraceae Gunnera magellanica

Gunnera tinctoria (chilense)

Hydrangeaceae Hydrangea serratifolia

Hypericaceae Hypericum perfoliatum

Icacinaceae Citronella mucronata

Lamiaceae Clinopodium darwinii Stachys grandidentata Stachys gilliesii Teucrium bicolor

Lentibulariaceae Pinguicula chilensis

Linaceae Linum bienne Linum chamissonis

Loasaceae

Loasa acanthifolia Loasa acerifolia Loasa tricolor Scyphanthus elegans Torres del Paine Torres del Paine, dissect

Lovely crimson-flowered epiphyte, some wonderful flowers found at Alerce Andino. Similar to *Sarmienta*, but tending to grow as a scrambling shrub through other plants and with bright orange flowers, stamens not strongly exerted. Alerce Andino Epiphyte with red-orange flowers, stamens strongly exerted. Generally too high to see well at Alerce Andino.

Common trailing species with glossy round leaves, Torres del Paine Immense herb with spiny 'rhubarb-like' leaves. Widespread in wet places especially Valdivian rainforest south to Torres

Common at Laguna del Laja, Siete Tazas with some huge old plants, also Heurquehue

Abundant alien

del Paine.

Evergreen shrub with fragrant flowers, Siete Tazas

Serra del Toro Common at Siete Tazas Meadow near Nahuelbuta, pinkish-cream Siete Tazas, Nahuelbuta road

Alerce Andino (Nahuelbuta 2010)

Slender pale blue alien, scattered Bright yellow flax

Alerce Costero, Nahuelbuta (2011) Near Nahuelbuta Orange with red and white, Siete Tazas, Villarica (2013) Yellow cup shaped flowers on twining stems, Siete Tazas (2010), superb at Paso Vergara

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Lobeliaceae

Lobelia tupa

Pratia longiflora

Loganiaceae

Buddleja globosa

Loranthaceae Misodendron linearifolium

Misodendron punctulatum

Tristerix corymbosus Desmaria mutabilis

Malvaceae

Corynabutilon ceratocarpum Corynabutilon ochsenii Corynabutilon vitifolium

Monimiaceae Laureliopsis philipiana

Myrtaceae

Amomyrtus luma

Luma apiculata

Ugni molinae

Onagraceae

Clarkia gayana Clarkia tenella

Fuchsia magellanicus [Oenothera acaulis Oenothera affinis Oenothera stricta

Oxalidaceae

Tall deep red with large acute leaves. Below Nahuelbuta 2011 in magnificent stands Creeping prostrate herb with lilac flowers, damp areas, Torres del Paine

Globular yellow flowers, superb at Villarica, also Paso Vergara where strongly dwarfed at altitude. Siere Tazas.

Heurquehue, Villarica, Siete Tazas, peculiar green parasite on *Nothofagus* Abundant parasite in far south and seemingly causing great damage to some forests Scarlet flowers, Alerce Andino 2010 Golden to scarlet parasite at Nahuelbuta. (Siete Tazas 2010)

Mauve flowers, forest at Siete Tazas Larger flowered species en route to Alerce Costero White form at Nahuelbuta

Glaucous pungent leaves with serrated margin, everygreen, Heurquehue and further south

Attractive orangey smooth bark, Alerce Andino, Heurquehue, etc Strongly scented creamy flowers in dense corymbs, Alerce Andino, Heurquehue Pretty wide pink bells, dwarf evergreen near Pucon. (Los Ruiles 2011)

Roadsides, pink to mauve annual near Siete Tazas Similar to *gayana* but purple-blue flowers, Siete Tazas and north

Widespread, especially in the south Huge white flowers, near Chol-Chol 2011] Abundant Evening Primrose Torres del Paine Oxalis adenophylla

Oxalis compacta

Oxalis enneaphylla

Oxalis lacinata Oxalis rosea Oxalis valdiviensis Oxalis erythrorhiza Oxalis squamata

Plantaginaceae

Plantago lanceolata Plantago major

Plumbaginaceae Armeria maritima ssp andina

Polemoniaceae

Collomia biflora Collomia cavanillesii Microsteris gracilis

Polygalaceae

[*Pteromonnina pterocarpa Polygala gnidioides

Polygala salasiana

Polygonaceae

Rumex acetosella

Portulacaceae

Calandrinia affinis

Calandrinia colchaguensis Calandrinia graminifolia

Calandrinia sp/Montiopsis sp Cistanthe grandifolia

[Montiopsis andicola Montiopsis cistiflorus Montiopsis sericea Stunning clumps at Paso Vergara with big pink flowers, also Altos de Lircay Dwarf yellow species on drier stony slopes at Paso Vergara (2013) Handsome clumps north of Punta Arenas in steppe, pink with darker veins, dense leaflets. Superb on Sierra del Toro. Pink, with fine leaves ,TDP Tall stoloniferous pink species Taller yellow flowered species at Villarica, Siete Tazas Lovely cushions with yellow flowers, Paso Vergara Pretty bright pink, among cinder at Siete Tazas, Laguna del Laja, Paso Vergara

Abundant and widespread alien Alien

Widespread in far south, also at Paso Vergara

Similar but shorter and deeper red, Torres del Paine Scarlet flowers, a bit like a centaury, Siete Tazas Laguna de Laja, Torres del Paine

Syn. *Monnina pterocarpa* Los Molles 2011] Pretty lilac milkwort at Altos de Lircay, also Laguna del Laja. Shrubby (2010) Mauve milkwort, prostrate, growing among *Azorella monantha* at Paso Vergara, Torres del Paine.

Abundant alien weed

Large white flowers from low rosettes of narrow leaves, (common at Altos de Lircay 2013) and at Paso Vergara Pink flowers, similar to *affinis*. Altos de Lircay, Nahuelbuta A couple in cinder at Villarica – originally considered *colchaguensis*, but on reflection habitat rules this out Various unidentified species seen Large pink saucer-flowers on long stems above fleshy grey leaves, cliffs en route to Paso Vergara Altos de Lircay 2008, Paso Vergara (2011) Laguna del Laja, white? Possibly this. Large pink flowers on stems from narrow basal leaves, Altos de Lircay (2013)

Primulaceae

Anagallis alternifolia

Anagallis arvensis Samolus spathulatus

Proteaceae Embothrium coccineum

Gevuina avellana Lomatia ferruginea

Lomatia hirsuta

Ranunculaceae

Anemone decapetala Anemone multifida

Hamadryas deplhinii

Hamadryas kingii

Ranunculus chilensis Ranunculus peduncularis

Ranunuculus repens

Rhamnaceae

Colletia spinosissima (syn ulicina) Discaria articulata

Discaria trinervis

Rosaceae

Acaena digitata Acaena lucida Acaena magellanica Acaena ovalifolia

Acaena pinnatifida Acaena splendens Fragaria chiloensis Heads of deep magenta flowers on tallish stems as we returned from Laguna del Laja, also Paso Vergara

Native, pinkish flowers on trailing stems, near Nahuelbuta, Torres del Paine also below Laguna de Maule where deep pink. Widespread weed Common in marshy places at Torres del Paine, pink flowers

Fabulous intense scarlet flowers on large bushes, superb throughout Lake District north to Nahuelbuta, also superb at Torres del Paine Pinnate glossy, leaves Heurquehue Ferny-leaved shrub, Alerce Andino, Alerce Costero, in flower at Villarica hotel (2011) Common large shrub in Araucania region, dentate oval leaves creamy flowers with petaloid anthers

White-flowered species at Nahuelbuta Laguna del Laja, Villarica and Conguillio, creamy anemone with dissect leaves. Common at Torres del Paine. Peculiar brownish flowers, silvery woolly leaves, near snow patch on Sierra del Toro. Leaves expand pinnate. Similar to above but leaves entire and shield-like. Sierra del Toro. Like *peduncularis* but larger and taller, Nahuelbuta Altos de Lircay to Torres del Paine, celandine-like flowers on tall stems. Sierra del Toro. Torres del Paine

Taller shrub, also very spiny Spiny near leafless bush with dense clusters of white bells flowers, Altos de Lircay, Siete Tazas, Laguna de Laja Common white flowered spiny shrub, akin to *Pyracantha*, Laguna del Laja to Torres del Paine.

Siete Tazas Torres del Paine Ottway Sound penguin colony Widespread and common especially in Torres del Paine, Villarica ? Big mats with tall inflorescences at Paso Vergara Common forest strawberry Geum magellanicum Rosa moschatus Rubus geoides

Rubus radicans Rubus ulmifolius

Rubiaceae Oreopolus glacialis

Santalaceae Quinchamalium chilense

Quinchamalium majus

Saxifragaceae

Ribes magellanicum

Ribes trilobum/punctatum Saxifraga magellanica

Schoepfiaceae

Arjona patagonica

Arjona pusilla

Scrophulariaceae

Jovellana violacea Mimulus cupreus Mimulus glabratus Mimulus luteus

Mimulus naiandinus

Ourisia cocinnea

Ourisia microphylla Ourisia ruelloides

Verbascum virgatum Veronica anagallis-aquatica

Solanaceae Benthamiella nordenskjoldii Cestrum parqui Common at Torres del Paine, tall golden-yellow Abundant alien shrub Common at Heurquehue, Alerce Andino creeping stems white flowers Similar to above but pink Abundant alien 'blackberry-like' shrub

Wonderful mats smothered in yellow flowers at Paso Vergara. Also very common on Sierra del Toro.

Widespread, small round heads of golden-yellow flowers, narrow leaves, the common species from Nahuelbuta south Similar. Altos de Lircay, Siete Tazas, broader orange-yellow heads of flowers (2013) lanceolate leaves.

Long racemes of greenish flowers, Nahuelbuta, Villarica, Torres del Paine Common forest species at Siete Tazas Torres del Paine, Laguna de Laja

Sweet-scented herb with white to pinkish round flowerheads, far south Similar, but white and near lakes en route to Puerto Natales

Roadsides near Concepcion (2008), below Nahuelbuta (2011) Wet rock seeps, in bud at Laguna de Maule Small yellow flowers, Laguna del Laja Common by wet flushes at Lagnua del Laja, Nahuelbuta, Villarica Fine clumps en route to Paso Vergara – poor this year because of habitat disturbance Lovely delicate species with tubular flowers widely flared at the mouth on long stems above distinct rosettes, Heurquehue, Villarica. Lovely pink flowered chasmophyte at Laguna de Laja Waterfalls and seeps at Torres del Paine, common by streams in Araucana area. Very widespread, slender yellow spikes Wet areas, widespread

Tight cushions with creamy tubular flowers. Sierra del Toro. Common at Siete Tazas, yellowish flowers Fabiana imbricata

Nierembergia repens

Salpiglossis sinuata

Schizanthus alpestris Schizanthus grahamii

Schizanthus hookeri

Solanum crispum

Solanum etuberosum Solanum krauseanum Solanum ligustrinum

Solanum valdivianum

Thymeleaceae

Ovidia andina

Tropaeolaceae

Tropaeolum polyphyllum

Tropaeolum speciosum

Tropaeolum tricolor

Valerianaceae

Valeriana carnosa Valeriana fonkii

Valeriana laxiflora

Verbenaceae

Diostea juncea

Junellia spp

Junellia thymifolia Junellia tridens

Violaceae

Fine shrub with tubular white to lilac flowers, widespread Siete Tazas, Laguna del Laja, Paso Vergara Locally abundant creeping herb, cup-shaped white flowers; Siete Tazas, Laguna del Laja. Both a gorgeous deep red-brown form at Laguna de Laja, superb white with reddish throats near Siete Tazas (Paso Vergara 2013), and a vellow form (2013) Small lilac flowers, near Siete Tazas Simply stunning at Paso Vergara, tall red-pink and golden flowers in abundance Tall pink and orange flowered herb at Siete Tazas, (Altos de Lircay), Laguna de Maule Very different to garden forms - broad greyish leaves, large corymbs of palish mauve flowers, Siete Tazas, Laguna de Laja Common and widespread, pinnate leaves Maybe this species climbing at Alerce Andino (2013) Frequent in forest at Siete Tazas and elsewhere, oval leaves, purple flowers. Dwarf forms on Paso Vergara Villarica, slender shrub, not very showy, pale flowers.

Pretty white flowers small shrub at Nahuelbuta, Villarica

Impressive golden yellow species with big spreading plants on rocky slopes at Paso Vergara, also Laguna de Maule Stunning climber with big red flowers, near Alerce Costero (2013)

Lovely red, yellow and blue tubular flowers on scrambling stems at Siete Tazas.

Torres del Paine Villarica, dense corymb of white flowers, alpine heath, somewhat *Lychnis*-like Scattered and widespread, typical tall white valerian

Fine large shrub with white to lilac tubular flowers in dense clusters on long stems, Siete Tazas, Laguna de Maule, Paso Vergara Other species seen but not identified e.g. Siete Tazas, Paso Vergara Altos de Lircay (2013) Scented pale pink flowers on wiry unkempt shrubs at Torres del Paine

	Five fantastic rosular violets were seen in flower.
Viola atropurpurea	Gorgeous tight rosettes and columns at Paso Vergara, an unusual white-flowered form
Viola glacialis	Purple flowers, in bare gravels at Laguna de Maule
Viola maculata	The common yellow violet at Torres del Paine, longer tapered leaves with acute to acuminate apices . Chileflora.com show this as the main species in Siete Tazas and quite different to what we saw at TDP! Yellow species are confusing and some were probably not identified
	correctly if at all! However, it may be that relatively few variable taxa are concerned.
[Viola subandina	Small rosular violet at Siete Tazas, but flowering over. In flower at Paso Vergara 2011]
Viola reichei	Common round-leaved yellow violet at Villarica, Nahuelbuta but perhaps also a big form of the same at Siete Tazas although some authorities give this as <i>maculata</i> !
Viola congesta	Lovely rosular violet at Siete Tazas, where still in flower in stony ground. Altos de Lircay (2013). Brownish rosettes with red glands and prominent white to purple flowers
Viola cotyledon	Lovely large flowered rosular violet at Laguna del Laja, white to purple, also at Villarica and truly superb clumps at Laguna de Maule
Viola volcanica	Similar to <i>congesta</i> but more pointed leaves, smaller white flowers that barely emerged from the rosettes. Laguna del Laja.
Winteraceae	
Drimys winteri	Large white flowered shrub/tree, at Siete Tazas, also Alerce Andino, understory at Villarica, widespread.
Alstroemeriaceae	
Alstroemeria aurea	Some superb stands by roadsides and in plantations near Alerce Costero, en route to Conguillio, often bicoloured
[Alstroemeria exserens	Pretty pink species by roadside en route to Laguna del Laja 2010]
Alstroemeria ligtu	Variable tall species pink to deep orange, abundant in Siete Tazas area, the orange form <i>simsii</i> encountered near Siete Tazas. Incredible displays of the pink form <i>incarnata</i> at Paso Vergara, although there remains a question mark over what this taxa is and may even be a large form of <i>angustifolia</i>
Alstroemeria ligtu subsp. simsii	Deep orange red form, seen along roadsides near Siete Tazas
Alstroemeria patagonica	Diminutive golden-flowered species at Torres del Paine, really rather common this year
Bomarea salsilla	Crimson-flowered climber, Siete Tazas.
Amaryllidaceae	Rhodophiala now reclassified as Myostemma
[Famatina maulensis	Bright red tubular flowers, Altos de Lircay 2008]
Famatina cisandina Bhadamhiala - Musatawa andiada	Deep red narrowish tubes, Paso Vergara
Rhodophiala = Myostemma andicola Rhodophiala= Myostemma araucana	Conguillio (2008), Villarica deep pink with dark centre Called as <i>montana</i> but it is this (similar) species

Rhodophiala = Myostemma chilense	Larger flowers, bright red with some yellow in throat, Siete Tazas and Nahuelbuta - a stunning colony near the entrance
Rhodophiala = Myostemma montana	Small yellow species, Maule
Rhodophiala= Myostemma phycelloides	Called as <i>advena</i> but I now think it is this species at Siete
Tristagma bivalve	Tazas Common white bulb near snowmelt (at Altos de Lircay 2013), a few at Paso Vergara
Bromeliaceae	
Fascicularia bicolor	Dense colonies at viewpoint at Nahuelbuta
Puya alpestris/bertroniana	Spectacular bromeliad at Siete Tazas and en route to Paso Vergara. Also near Nahuelbuta. Singular coloured blue-
Puya coerulea	green flowers attended by various birds. En route to Laguna de Maule and Paso Vergara, much more slender than previous species with bright pink stems, dark blue tubular flowers
Burmanniaceae Corsiaceae	There is some debate as to whether the genus <i>Arachnitis</i> actually better belongs in <i>Burmanniaceae</i> rather than <i>Corsiaceae</i>
Arachnitis uniflora	Extraordinary saprophyte with long spidery appendages, Siete Tazas, also Nahuelbuta, Altos de Lircay (2013)
Iridaceae	
Conanthera bifolia	Pretty blue 'shooting stars', Siete Tazas, Nahuelbuta
Herbetia lahue	Near Los Ruiles (2011). Near Nahuelbuta (2013). Salto de Laja 2017.
Libertia chilensis	Common with three-petaled white flowers.
Libertia formosa	Large-flowered species, en route to Conguillio, Alerce Andino, Alerce Costero
Olsynium frigidum	Yellowish, dwarf species, Maule
Olsynium lychholmii	Coppery coloured bulb on Sierra del Toro
Olsynium philippii	Pink with yellow centre Nahuelbuta (2013). Bract beneath inflorescence does not or scarcely exceed the flowers. We did not see this species in 2015
Olsynium junceum	Taller white to pinkish flowers, rush-like jointed stems. There is obvious confusion between this and <i>philippii</i> , but the bract beneath the inflorescence is long and (often greatly) exceeds it, with an obvious membranous margin. It would seem that all the plants we saw were this species. Also Sierra del Torro (TDP)
Olsynium junceum ssp depauperatum	Smaller form of the above, Villarica
Olsynium biflora	Purple-veined white trumpets, common in far south, superb displays in places. Abundant at TDP.
Sisyrinchium arenarium	Possibly this dark maroon-eyed pale yellow flowered, variable in size, scattered
Sisyrinchium azureum	Purple flower at Siete Tazas, not quite sure what it was but maybe this? (2013)
Sisyrinchium cuspidatum	Slender yellow species at Siete Tazas
Sisyrinchium maculatum	Dark eyed pale yellow species, near Angol (2013)

Sisyrinchium patagonicum Solenomelus peduncularis Solenomelus segethii	Torres del Paine, Punta Arenas Pretty yellow species, near Nahuelbuta (2013) Pretty mauve bulb at Torres del Paine
Solenometus segenti	Tetty nauve baib at Tones dell'ante
Liliaceae	
Fortunaria biflora	Common white bulb in meadows, dark mid-vein. Near
	Antuco and Nahuelbuta.
Pasithea coerulea	Blue-purple open flowers on spindly stems, scattered Siete Tazas, Laguna del Laja, common at Nahuelbuta
Orchidaceae	Twenty-eight taxa of superb Chilean orchids were seen, mostly tall showy plants with large flowers.
Bipinnula apinnula	Tall green orchid with prominent tubercle. Stunning metallic blue and red throat patch. Siete Tazas. A rare orchid.
Chloraea alpina	Gorgeous golden orchid in alpine zone (at Altos de Lircay 2013), just gone over at Siete Tazas.
Chloraea barbata	Mid- to deep-yellow with obvious serrate lip with lots of tubercles, near Laguna de Laja, wher eit hybridises with <i>bidentata</i>
Chloraea bidentata	Yellow and green orchid with characteristic reflexed sepals, Laguna del Laja
[Chloraea chica	Good population at Torres del Paine, small white flowers, the least showy species seen. Not 2017]
Chloraea chrysantha	Tall small-flowered golden orchid, widespread e.g. Siete Tazas, Nahuelbuta, etc
Chloraea crispa	Impressive tall white species in pine plantations near Los Angeles.
Chloraea galeata	Wonderful tall white flowered orchid with reflexed sepals, widespread but most common at Siete Tazas, also Nahuelbuta, Conguillio
Chloraea gavilu	Appearance is similar to <i>lamellata</i> (and <i>barbata</i>), long ridge- like projections on lip, variable amount of green lines behind column. Near (Altos de Lircay 2010), Nahuelbuta. Though similar in form (but not colour) to <i>longipetala</i> it seems they are separate species.
Chloraea grandiflora	Nahuelbuta, in leaf and bud only (Jan flowering).
Chloraea gaudichaudii	Widespread small white flowered orchid, variable amounts of green on sepals and lip; Laguna del Laja, common near Conguillio.
[Chloraea homopetala	One in bud at Los Ruiles 2011, although surely this is just an ecotype of <i>nudilabia</i> ?]
Chloraea incisa	Tall green species en route to Laguna del Maule
Chloraea lamellata	Tall golden-flowered orchid, predominantly smooth lip with only a few green ridges, near Siete Tazas.
Chloraea lechleri = collicensis	Somewhat similar to gaudichaudii, but larger flowers and
Chloraea leptopetala	greener, prominent green tips, en route to and at Siete Tazas. Dense heads of green flowers, stony slopes at Torres del Paine
Chloraea longipetala	Stunning white species, yellow on lip and prominent green lines of lamellae. Nahuelbuta road.

Chloraea magellanica	Porcelain Orchid, perhaps the finest <i>Chloraea</i> with amazing green-veined grey-green flowers and tubercle-covered lips, Villarica, but most abundant at Torres del Paine.
Chloraea nudilabia	Lovely golden flowers with green veins at Nahuelbuta.
Chloraea viridflora	Similar to magellanica, but greener. Siete Tazas
Chloraea virescens	Handsome white orchid with variable amounts of green. Roadsides near Pucon and Conguillio.
Chloraea volkmannii	Similar to <i>virescens</i> but generally shorter, with horizontal lateral sepals. Common near Nahuelbuta
Chloraea bidentata x barbata	Natural hybrid between <i>barbata</i> and <i>bidentata</i> with both parents growing together and many intermediates; Laguna del Laja
Codonorchis lessonii	Pretty white orchid with pinkish markings. Solitary flowers.
Gavilea araucana	Near Nahuelbuta, also Torres del Paine. Smallish flowers, lateral sepals have long slender tips.
Gavilea glandulifera	Siete Tazas, also below Nahuelbuta (2011). Similar to <i>araucana</i> but flowers larger with more yellow on lip.
Gavilea kingie/gladysiae	Peculiar taxa with lip same as other two petals, possibly a hybrid or mutation of more common <i>littoralis</i> which grow quite literally next to them.
Gavilea littoralis	Similar to <i>odoratissima</i> . Less orange on lip, smaller stature. Torres del Paine
Gavilea lutea	Bright, lemon yellow with green tips. Villarica in bud. The hybrid <i>supralabellata</i> is very similar and it was this that was probably seen at Torres del Paine.
Gavilea odoratissima	Fine tall yellow and orange species, widespread Siete Tazas and Laguna del Laja (where over), but in good flower at Nahuelbuta and Villarica where many good spikes.
Gavilea supralabellata	Locally abundant at Torres del Paine. On reviewing images, it seems it was this species seen at Torres del Paine. Similar to <i>lutea</i> which was probably also seen and is a much richer yellow and flowers open more! Considered to be of hybrid origin between <i>Chloraea</i> and <i>Gavilea</i> !
Gavilea venosa	Fine orchid with white sepals and bright yellow and green. Nahuelbuta.
Palmaceae	
Jubaea chilensis	Some planted specimens near Molina, the native Chilean Palm
Philesiaceae	
[Lapageria rosea	Non-flowering stems scrambling over shrubs at Los Ruiles 2011]
Luzuriaga polyphylla	Pretty white flowered epiphyte common at Alerce Andino. Smaller leaves than <i>radicans</i> .
Luzuriaga radicans	Orange-berries epiphyte at Heurqhuehue, Alerce Costero. Longer leaves than <i>polyphylla</i> .
Philesia magellanica	Gorgeous waxy pink bells, Alerce Andino

Poaceae

Chusquea coleou Chusquea quila Abundant bamboo – shorter and denser than *quila* Abundant bamboo, especially in damper forest, taller and lusher than *coleou*

Systematic List 2 Birds

List includes a number of species seen in parentheses during previous visits to give a full picture of what may be encountered during the tour.

Chilean Tinamou	Nothoprocta perdicaria	One ran across the road near Vilches
Darwin's Rhea	Rhea pennata	Locally common in far south steppe. On the way
	····· <i>J</i>	to and at Torres del Paine. Some stellar views
		from only a few metres, including a male with
		chicks facing off with nosey Guanacos.
California Quail	Callipepla californica	Common and widespread in rural areas
~		especially
White-tufted Grebe	Rollandia rolland	Torres del Paine, Villarica
Silvery Grebe	Podiceps occipitalis	Torres del Paine, (near Curico 2011)
Great Grebe	Podiceps major	Torres del Paine, (Villarica 2011)
[Magellanic Penguin	Spheniscus magellanicus	Thousands at Isla Magdalena. Not visited 2015]
[Sooty Shearwater	Puffinus griseus	Thousands at Boca Budi 2010]
[White-chinned Petrel	Procellaria aequinoctialis	Punta Arenas 2010]
[Southern Giant Petrel	Macronectes giganteus	Puerto Natales, Isla Magdalena. Not visited 2015]
[Magellanic Diving Petrel	Pelecanoides magellani	On journey to Isla Magdalena. Not 2015.]
Neotropical Cormorant	Phalacrocorax brasilianus	Widespread in wetlands throughout. Torres del
		Paine, near Curico, Lago Colbun
Imperial Cormorant	Leucocarbo atriceps	Colonies on piers at Punta Arenas, Puerto Natales
		also Puerto Montt
Rock Cormorant	Phalocrocorax magellanicus	Near Punta Arenas
Black-crowned Night	Nycticorax nycticorax	Puerto Montt seafront
Heron		
Cocoi Heron	Ardea cocoi	?
[Great Egret	Ardea alba	Near Conguillio 2011]
[Snowy Egret	Egretta thula	Puerto Varas area]
Cattle Egret	Bubulcus ibis	Scattered in northern rural areas, some large
		flocks.
Chilean flamingo	Phoenicopterus chilensis	Small numbers in the far south
Coscoroba Swan	Coscoroba coscoroba	Southern lakes
Black-necked Swan	Cygnus melanocoryphus	Common in the south especially Puerto Natales
Upland Goose	Chloephaga picta	Abundant in south, also one at Laguna de Maule
Ashy-headed Goose	Chloephaga poliocephala	One at Laguna Azul, Torres del Paine
Kelp Goose		San Gregorio
Flying Steamer Duck	Tachyeres patachonicus	Torres del Paine, (Conguillio, 2013)
[Flightless Steamer Duck	Tachyeres pteneres	Two near Punta Arenas 2011]
Spectacled Duck	Speculanus specularis	Torres del Paine, Villarica
Torrent Duck	Merganetta armata	Seen superbly well below Paso Vergara (Siete
		Tazas 2010)
Chiloe Wigeon	Anas sibilatrix	Widespread in south, also Villarica
Yellow-billed Pintail	Anas georgica	Scattered and widespread
Speckled Teal	Anas flavirostris	Probably more widespread than we recorded in
		Torres del Paine, Villarica
[Red Shoveler	Anas platalea	Lovely duck, Torres del Paine]
[Silver Teal	Anas versicolor	Ponds near Punta Arenas 2008]
[Rosy-billed Pochard	Netta peposaca	Near Torres del Paine 2013]

Andean Duck [Lake Duck Crested Duck Black-faced Ibis

[White-faced Ibis Turkey vulture Black vulture Andean condor Cinereous Harrier Black-chested Buzzard Eagle Variable hawk [Chilean Hawk White-tailed Kite Southern Caracara Chimango Caracara [Mountain Caracara White-throated Caracara [Peregrine Falcon

American kestrel [Aplomado Falcon [White-winged coot

Red-gartered Coot Plumbeous Rail Southern Lapwing [Two-banded Plover Magellanic Oystercatcher

[American Oystercatcher Whimbrel [White-rumped Sandpiper Baird's Sandpiper Rufous-bellied Seedsnipe

Grey-breasted Seedsnipe South American Snipe Dolphin Gull Kelp gull Franklin's gull Brown-hooded gull Andean Gull

[Chilean Skua

Feral pigeon Eared dove Chilean Pigeon Oxyyura ferruginea Oxyyura vittata Lophonetta specularioides Theristicus melanopis

Plegadis chihi Cathartes aura Coragyps atratus Vulture gryphus Circus cinereus Geranoaetus melanoleucus

Buteo polyosoma Accipiter chilensis

Caracara plancus Milvago chimango Phalcoboenus megalopterus

Falco peregrinus

Falco sparverius Falco femoralis Fulica leucoptera

Fulica armillata Pardirallus sanguinolentus Vanellus chilensis Charadrius falklandicus Haematopus leucopodus

Haematopus palliates Numenius phaeopus Calidris fuscicollis

Thinocorus Gallinago paraguaie Larus scoresbii Larus dominicanus Larus pipixcan Larus maculipennis Choricocpehalus serranus

Stercorarius chilensis

Columba livia Zenaida auriculata Patagioenas araucana

Torres del Paine Two at Villarica] Widespread in south Common and widespread in pasture from Lake District southwards Lago Budi 2010] Common Common Daily in Torres del Paine, also Paso Vergara Good view at Torres del Paine Seen well at Torres del Paine, also Laguna de Maule, Paso Vergara Common in north Scattered in wooded habitats, 2011] En route to Santiago Common in the far south, scattered further north Abundant and widespread Two at Laguna de Laja 2015] Sierra del Toro One at Laguna del Laja. At Alerce Andino, a pair calling loudly and seen 2010] Widespread Torres del Paine in 2008] Torres del Paine, usually more widespread in wetlands throughout] Widespread, Villarica, Torres del Paine. Seen very well at Torres del Paine Abundant and widespread Ottway Sound 2010] Southern shores and inland rivers, Torres del Paine, Puerto Montt Puerto Montt 2011] Puerto Montt, Villarica Ottway Sound 2010]

With flamingos south of Puerto Natales One on Sierra del Toro at 850m. Undoubtedly this species despite low altitude. Seen very well at Laguna de Maule Torres del Paine Southern shores 2010 Common in the south, also Puerto Montt Puerto Montt Widespread Gorgeous gull; Laguna de Laja (also Laguna de Maule) Puerto Natales. (Very common en route to Isla Magdalena 2013)] As usual Widespread Widespread

Black-winged ground	Metriopelia melanoptera	Paso Vergara 2013
dove		i aco i cigara zozo
Piqui ground dove	Columbina picui	Widespread south to Siete Tazas
Burrowing Parakeet	Cyanoliseus patagonus	A flock of a dozen of these handsome parrots
		flying en route to Paso Vergara and Laguna de Maule
Austral parakeet	Enicognathus ferrugineus	Common in forest areas
Slender-billed parakeet	Enicognathus leptorhynchus	Villarica, near Volcan Lanin.
[Band-winged nightjar	Caprimulgus longirostris	Heard at Siete Tazas one evening (one sunning
		itself at Conguillio after the late snow 2010)]
[Giant hummingbird		En route to Paso Vergara 2011]
Green-backed firecrown	Sephanoides sephanoides	Scattered and widespread, Siete Tazas, Alerce
		Andino and Heurquehue
White-sided Hillstar		Laguna de Laja
Ringed Kingfisher		One en route to Conguillio
Magellanic Woodpecker	Campephilus magellanicus	Widespread in mature forests but only seen at
		Villarica and Alerce Costero this year
		(Nahuelbuta, also seen Torres del Paine 2015)
Chilean Flicker	Colaptes chilensis	Widespread
Striped woodpecker	Picoides lignarius	Nahuelbuta. Vilches (Siete Tazas, 2010), Torres
		del Paine (2013)
Common Miner	Geositta cunicularia	Laguna de Maule, Torres del Paine 2011
Short-billed Miner	Geositta antarctica	One at Torres del Paine
Bar-winged Cinclodes	Cinclodes fuscus	Conguillio, Torres del Paine
Grey-flanked Cinclodes	Cinclodes oustaleti	Torres del Paine
Dark-bellied cinclodes	Cinclodes patagonicus	Scattered and widespread (Laguna del Laja 2013), Puerto Varas, Villarica
[Plain-mantled tit- spinetail	Leptasthenura aegithaloides	Only seen at Villarica but widespread in 2008]
Thorn-tailed rayadito	Aphrastura spinicauda	Common and widespread in woodlands
White-breasted	Pygarrhichas albogularis	Usually widespread in woodlands, but only seen
Treerunner		at Altos de Lircay and Conguillio 2013]
[Scaly-throated	Upucerthia dumetaria	Great views at Torres del Paine]
Earthcreeper		
[Sharp-billed canastero	Asthenes pyrrholeuca	Two near Conguillio 2010]
Austral Canastero		Singing and showing well at Torres del Paine
Moustached Turca		Paso Vergara road
Chestnut-throated Huet-	Pteroptochos castaneus	Siete Tazas where seen briefly
huet		
Black-throated Huet-huet	Pteroptochus tarnii	Seen quite well at Alerce Andino, also en route to
		Nahuelbuta
Chucao Tapaculo	Scelorchilus rubecula	Seen very at Alerce Andino and Alerce Costanera.
		Heard widely in Lake District.
[Ochre-flanked Tapaculo	Eugralla paradoxa	Two seen very well at Alerce Andino (one at
		Conguillio 2010)]
[Magellanic Tapaculo	Scytalopus magellanicus	Amazing prolonged very close views at
		Heurquehue 2013]

Spot-billed Ground-	Muscisaxicola maculirostris	Paso Vergara, Laguna de Maule (Altos de Lircay
tyrant		2013)
[Cinereous Ground-	Muscisaxicola cinereus	Larger species at Altos de Lircay 2013]
tyrant		
[Dark-faced ground	Muscisaxicola maclovianus	Villarica 2010, Conguillio]
tyrant		
Rufous-naped Ground-	Muscisaxicola rufivertex	Laguna del Laja, Paso Vergara. If habitat is to be
tyrant	-	believed it is this species, however they both
		seemed closer to White-browed in appearance,
		but both were in dry situations with neigh a bog
		in sight the preferred habitat of the latter.
Ochre-naped Ground-		Serra del Toro ridge.
tyrant		
Cinnamon-bellied		Lago Toro
Ground-tyrant		
White-browed Ground	Muscisaxicola albilora	Possibly at Paso Vergara (Altos de Lircay 2010)
tyrant		
Spectacled Tyrant	Hymenops perspicillata	En route to Conguillio
Austral Negrito	Lessonia rufa	Common and widespread in south
Fire-eyed diucon	Xolmis pyrope	Widespread, Siete Tazas to Torres del Paine
White-crested elaenia	Elaenia albiceps	Common and widespread in woodlands
Tufted tit-tyrant	Anairetes parulus	Frequent and widespread in woodlands, seen at
		Torres del Paine, Heuquehue, Alerce Costero
Rufous-tailed Plantcutter	Phytotoma rara	Seen well at Torres del Paine. Siete Tazas (2013),
	· · · · ·	Antuco.
Barn Swallow	Hirundo rustica	Paso Vergara
Chilean swallow	Tachycineta meyeni	Widespread
Blue-and-white swallow	Notiochelidon cyanoleuca	Widespread
Southern house wren	Troglodytes aedon	Common and widespread
Austral thrush	Turdus falcklandii Mimus thenca	Common and widespread
Chilean mockingbird	Anthus correndera	Common and widespread in rural areas in north Scattered, commonest in the south
Correndera pipit Austral blackbird		Widespread
Shining cowbird	Curaeus curaeus	Widespieau
[Yellow-winged	Agelasticus thilius	Torres del Paine
Blackbird		Torres del l'une
Long-tailed meadowlark	Sturnella loyca	Common and widespread
Grey-hooded sierra-finch	Phrygilus gayi	Laguna de Maule Paso Vergara (2013)
Mourning sierra-finch		Paso Vergara, Torres del Paine (2008)
Patagonian sierra-finch	Phrygilus patagonicus	Widespread
Plumbeous sierra-finch	Phrygilus unicolor	Laguna del Laja (Altos de Lircay 2010)
		о ,
[Band-tailed Sierra Finch	Phrygilus alaudinus	Leaving Siete Tazas 2013]
Common diuca-finch	Diuca diuca	Usually common and widespread, but hardly
		seen this year!
Rufous-collared sparrow	Zonotrichia capensis	Common and widespread
House sparrow	Passer domesticus	Common and widespread in towns
Black-chinned siskin	Carduelis barbata	Common and widespread, abundant at Siete
		Tazas
[Yellow-bridled Finch	Melanodera xanthogramma	One at Villarica 2013]
Greater Yellowfinch		Laguna de Maule , where tame at viewpoint

Grassland Yellowfinch Sica [Patagonian Yellowfinch Sica

Sicalis luteola Sicalis lebruni Scattered this year. Torres del Paine 2010]

Systematic List 3 Mammals

Few mammals were (and generally are) seen on this tour, though this year had particularly few. Those from previous tours are included to give an idea of what is possible during the tour.

[Degu		Probably one of these at Paso Vergara 2013]
[Pudu	Pudu pudu	Tiny deer glimpsed by a few at Altos de
		Lircay 2010]
Guanaco	Hippocamelus bisulcus	Very common at Torres del Paine. Very
		close views.
[Patagonian Huemul	Hippocamelus bisulcus	One at Torres del Paine 2013]
[Grey Fox		Seen well at Villarica and Torres del Paine
		2013]
[Fuegian Fox	Pseudalopex culpaeus	Torres del Paine, similar to the previous
		species 2013]
[Puma	Puma concolor	Dung found at Torres del Paine 2010]
[South American Fur Seal	Arctocephalus australis	Isla Magdalena 2008]
[Humbolt's Hog-nosed	Conepatus humboltii	Great views at Torres del Paine 2013]
Skunk		
Brown Hare		Widespread alien
Rabbit		Widespread and common alien
[Black Dolphin	Cephalorhynchus eutropia	Two swimming alongside Puerto Montt sea
		front 2013]
[Peale's Dolphin	Lagenorhynchus australis	Maybe this species briefly riding alongside
		the boat from Isla Magdalena 2013]

Systematic List 4 Amphibians and Reptiles

Many thanks to Hugh Woodland for identifying many of the reptiles, amphibians and insects during this tour.

Emilio's Ground Frog	Eupsophus emiliopugini	Alerce Andino
Chiloe Ground Frog	Eupsophus calcaratus	Alerce Costero
Alsodes barrioi	Cabreria spiny-chested frog	Alerce Costero
	Telmatobufo bullocki	Possibly this at Alerce Andino
Chilean Slender Snake	Tachymenis chilensis	Villarica NP
Cyan tree iguana	Liolaemus cyanogaster	Nahuelbuta (on rocks)
Wreath Tree Iguana	Liolaemus lemniscatus	Siete Tazas

Thin Tree Lizard

Painted Tree Iguana

Liolaemus tenuis

Liolaemus septentrionalis Liolaemus zabalai Liolaemus lineomaculatus Siete Tazas, but widespread south of here in warmer forests Siete Tazas Laguna de Laja Alerce Andino

Systematic List 5 Butterflies (& Odonata)

Yramea Fritillary	Yramea cytheris	Quite widespread, typical small fritillary
Four-eyed Lady	Vanessa carye	Some very good sightings, one the showiest Chilean species
Silver Satyr	Argyrophorus argenteus	Laguna de Laja
	Neomaenas janirioides	Laguna de Laja
Common Chilean Satyr	Cosmosatyrus chilensis	Laguna de Laja and elsewhere
	Neomaenas simplex/humilis	Large genus so hard to be precise
	Pedaliodes sp.	Many species in this genus
	Pseudolucia plumbea	Villarica, both males and females posing
		well in sunny glade. 38 species listed!
	Pseudolucia munoae	Laguna de Laja
	Colias flaviola	Torres del Paine
Lesbia Clouded Yellow	Colias lesbio	Torres del Paine
Andean Foothills White	Tatochila theodice blanchardii	Widespread white
	Mathania leucothea	A large white at Nahuelbuta
Funereal Duskywing	Hesperia negra	Siete Tazas
Branded Skipper	Hylephila fasciolata	
Fiery Skipper	Hylephila phyleus	Nahuelbuta
Odonata		
	Erythrodiplax connata	Near Nahuelbuta
	Antiagrion grinbergsi	Alerce Andino damselfly