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Land of the llamas – north-west Argentina

Lorna and Keith Ferguson

The Andes of Northern Argentina offer travellers an amazing and dramatic range of scenery and plant life, from the high puna with its impressive tall cacti to the rich forests of the deep valleys and to the expansive vineyards. Amongst the diversity can be found plants we know and grow in our gardens, as well as many strange and exotic species perhaps known only from botanical gardens and books.

Over some years we have travelled to see this rewarding flora, from near the Bolivian border in the Province of Jujuy, south-west through Salta Province and further south into Catamarca, almost to the border of Rioja Province.

Flying from Buenos Aires and staying in Salta (1187m) to acclimatise to the altitude, we've then headed 190km north (on the main road) into Jujuy and the township of Purmamarca (2192m), another excellent centre for exploration as it's near the junction of the main road north to Bolivia and west to

Chile (fig. 1) over the most northern of eight major road-passes over the Andes. Gaining height leaving the town of Jujuy, the landscape becomes more barren and rocky; here are glimpses of red nestling amongst the rocks, which turn out to be *Glandularia peruviana* (fig. 2), the parent of the range of half-hardy "verbenas" grown in our gardens. Northwards, the valley opens up and huge cacti begin to dominate the landscape: usually *Echinopsis atacamensis* (fig. 3), up to



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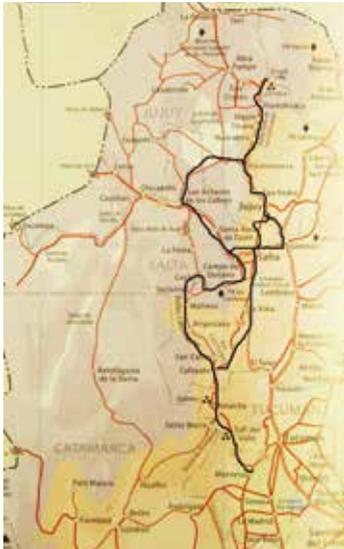


Fig. 1 Magnificent views, and challenging roads



Fig. 2 *Glandularia peruviana*



Fig. 4 Large cacti host smaller *Tillandsia*



Fig. 5 *Oreocereus trollii*



Fig. 6 *Opuntia sulphurea*



Fig. 7 *Prosopis alpataco*



Fig. 3 Huge cacti, usually *Echinopsis atacamensis*, dominate the landscape

4m tall, often branched and frequently hosts to tiny species of *Tillandsia* (fig. 4), one of the many kinds of Bromeliaceae.

Continuing north towards Bolivia, the eroded rock formations are dramatic (fig. 8) and the vegetation amongst the tall cacti consists of many smaller cacti: *Oreocereus trollii* (fig. 5) with long, evil-looking spines and red flowers rising from a long, grey indumentum; *Opuntia sulphurea* (fig. 6) and many different scrubby shrubs and small trees usually with fierce spines, often members of the legume family; *Prosopis alpataco* (fig. 7), one of the many species of the genus; the striking yellow-flowered *Cercidium praecox* looking very like a yellow *Cercis*; and *Senna (Cassia) aphylla*. About 16km beyond Tilcara the road crosses the Tropic of Capricorn at

2470m (fig. 9). Continuing towards Bolivia, the road rises to more than 3000m and the vegetation becomes very sparse on the dry, rocky hillsides.

On our second visit we took a lesser road, narrow but well paved at first, from Salta to Purmamarca eastward, then climbing high in a loop north-west, through a well-forested valley (fig. 10) where the large trees included many legumes such as *Prosopis nigra* and *Acacia visco*, often festooned with epiphytes (fig. 11), both ferns and bromeliads. A curious shrub we saw here and a number of times later is *Vassobia breviflora* (fig. 12) in the potato family, a relative of *lochroma australe*. In open areas by the roadside grew *Herbertia lahue* and *Commelina erecta* as did a spectacular *Ipomoea* with pale mauve flowers and a dark purple-blue centre and divided leaves.



Fig. 8 Dramatic rock formations

Where the trees give way to more open, grassy, and later rocky terrain, grew *Pavonia revoluta*, a showy member of the Mallow family, and the remarkable *Puya dyckioides* (fig. 13), one of a huge genus in South America ranging from the very large species associated with the sea cliffs of Chile to small 30cm-high plants in more rocky, arid, inland habitats. A pretty little red-flowered subtropical legume, *Camptosema rubicundum*, scrambled through the scrubby vegetation. Leaving the wooded valley the road becomes rippio and shortly joins the main road to Purmamarca.

From Purmamarca a long, twisting but well-made road climbs west towards the border with Chile. The views are spectacular. Here are found in its native habitat *Nicotiana glauca* (fig. 14),

a shrub which we grow in the south of Britain and which is naturalised in parts of the Mediterranean where it's common in gardens. Pushing through the stony soil, white-flowered *Habranthus andalgalensis* was our first introduction to the showy bulbs of northern Argentina.

Higher up in seeps by the road are big clumps of *Erythranthe* (syn. *Mimulus*) *depressa*, a striking dark spot on the lower lip of the flowers. Also in damp places, the tiny *Gentiana prostrata*, *Anagallis alternifolia* and *Ranunculus flagelliformis* form 3cm thick carpets. At the top of a pass, at almost 4150m, the scenery is dramatic: hills show coloured bands of rock where the sparse grass has been burnt off to try and encourage new growth for grazing llamas and vicuna. Huge prostrate clumps of *Bolax gummifera* (fig. 15)



Fig. 9 Our route crossed the Tropic of Capricorn



Fig. 10 Forested valleys



Fig. 11 Epiphytes draped the trees



Fig. 12 *Vassobia breviflora*



Fig. 13 *Puya dyckioides*

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Fig. 14 *Nicotiana glauca* in its native habitat



Fig. 15 *Bolax gummiifera*



Fig. 16 *Adesmia echinus*



Fig. 17 *Cestrum parqui*



Fig. 18 *Argemone mexicana*

remain, the exudate forming globules on the surface of the plant. It is closely related to *Azorella trifurcata*, from Patagonia, which is grown in UK rock gardens.

Herds of friendly llamas grazed at 3350m on the salt bushes on the huge Salinas Grandes. The main road to Chile continues on over another pass. We took the lesser road west alongside the salt plain to San Antonia de los Cobres (3775m), a long-established mining town whose fortunes have revived with lithium and molybdenum. On the rocky outcrops along this rippio road are found a number of genera with better known counterparts south in Patagonia, but here adapted to the arid and salty conditions with reduced, often fleshy foliage; they include *Mutisia sinuata*, *Adesmia echinus* (fig. 16) with its very characteristic flowers used to identify this huge genus in South America, *Junellia seriphoides*, *Calceolaria hypericina*, *Werneria pygmaea*, *Fabiana viscosa*, *Chuquiraga atacamensis*, *Arenaria rivularis* and big clumps of *Austrocactus*.

Cachi (2280m) is an ancient town in the dry mountains with fine Spanish architecture late in its history. On our first visit, making our way up the deep valley on an unmade road in thick mist and rain, we almost despaired of reaching Cachi by nightfall; then suddenly we burst out of the clouds

into bright sunshine on high plains covered with candelabra cacti. On a subsequent visit during a severe drought year the vegetation was rather stressed, but we enjoyed bright sunshine and a newly made road! We learned later that it was clear in the mornings but cloud descended in the early afternoon.

There is rich botanising here in the surrounding region and, descending to the valley we had struggled up, we found much of interest. *Cestrum parqui* (fig. 17) with its orange sprays of flowers was common. One of the few passion flowers in the region, *Passiflora tucumanensis*, scrambled over shrubs and fences, as did *Clematis montevidensis* with small heads of narrow-petalled, cream-coloured flowers which produce big seedheads. *Commelina erecta* was growing on verges and an amazing, huge clump of dodder, *Cuscuta*, completely engulfed an invisible shrubby host; the inevitable *Argemone mexicana* (fig. 18) occurs as a roadside weed in places. In the high mountains grows a member of the Loasaceae with strange flowers, *Caiophora chuquitensis*; at first we thought it to be a Loasa, some species of which are grown as annuals in the UK. Loasaceae have stinging hairs which can be extremely painful, even worse than our native nettles.

Lower down were abundant specimens of *Ioichroma australe* (fig. 19) in its blue form; the white and

blue forms are often grown in the South West of the UK, and there is a notable large specimen making a small tree some 3m high in our neighbouring Gloucestershire village of Mitcheldean. In open spaces, *Stenandrium dulce*, a delightful little Acanthaceae only a few cms tall with mauve flowers, carpeted the ground and with it grew pink-flowered *Oxalis lasiopetala*. The roadside banks support *Heimia salicifolia*, a yellow-flowered member of the *Lythrum* family which flowers in a sheltered position in our gardens in October. The orange-flowered *Tecoma stans* climbs through the roadside vegetation, while in more open areas is *Begonia boliviensis*, one of the parents of our patio 'Million Kisses series' begonias. Another *Glandularia* with white, very fragrant flowers, *G. platensis*, was recently introduced into this country as a conservatory plant where it will perfume the air in the evening, suggesting moth pollination. Here also is *Sphaeralcea philippiana* and the pink-flowered *Spigelia andina*, one of the many species of the genus in South America readily recognised here by its close resemblance to the North American *S. marilandica* which we grow in Britain. In a damp roadside woodland we found an Araceae with 60cm long pinnate leaves and a dark purple-maroon spathe, *Gorgonidium vermicidium*, a local endemic.

Going south towards Cafayate we stopped at the village of Molinas owing to a puncture, an occupational hazard on rippio roads (fig. 20). Near the church was a magnificent clump of the Argentine Amaryllidaceae, *Placea arzae* (fig. 21), somewhat resembling the *Amaryllis* we grow in our houses. Molinas is famous for its particularly fine Spanish church amongst the many in villages throughout the Northern Andes. The roof is lined with cactus wood, which is obtained from the giant cacti (usually species of *Trichocereus*) beneath the fleshy outer part of the stem. The wood is used widely for decorative and functional purposes, as well as for tourist souvenirs (fig. 22).

Continuing to Cafayate (1685m) there is more splendid scenery and a different range of plants with still more cacti. *Stetsonia coryne*, some 4m tall and spreading to the same diameter, much branched and ribbed with rows of spines, grows among the small trees and shrubs. On open ground there are many very different cacti, including *Lobivia bruchii* with orange flowers and numerous long thin spines; flamboyant *Echinopsis candicans* with large white flowers which open at night and are over by midday; the strange, snake-like *Echinopsis thelegona* (fig. 23) which creeps along the ground; the domed *Gymnocalycium saglionis* with a remarkably intricate pattern



Fig. 19 *lochroma australe*



Fig. 20 Rippio roads make for adventures



Fig. 21 *Placea arzae*



Fig. 22 Cactus wood is widely used



Fig. 23 Serpentine *Echinopsis thelegonus*

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Fig. 24 *Bougainvillea spinosa*Fig. 25 *Fuchsia boliviana*Fig. 26 *Juglans australis*

Fig. 27 Ungrazed gorges are rich in plants.

Fig. 28 *Bomarea macrocephala*

of spines; and innumerable others. Among them can be found a lovely creeping yellow-flowered mallow, *Cienfuegosia argentina*. Attached to the branches of the surrounding trees, especially on *Bougainvillea spinosa* (fig. 24) with its white bracts, were pretty little epiphytes such as blue-flowered *Tillandsia reichenbachii*.

Travelling 500km south from Salta, after climbing through arid barren puna one descends to Tafi del Valle (2100m), another area with rewarding plants. This is at the head of a deep, forested valley of some 60km running down to the large city of Tucuman at 420m. Botanically fascinating, above Tafi del Valle is puna vegetation while the forest becomes richer and more subtropical towards Tucuman, which lies on a richly cultivated plain. As one descends, the humidity increases and the trees become festooned with epiphytes such as the bromeliad *Aechmea distichantha* and the fern *Blechnum occidentale*.

Fuchsia boliviana (fig. 25) with long, tubular red flowers is frequent in the understory along with subtropical species including climbing *Mandevilla brachyloba* with white tubular flowers, widespread yellow-flowered *Ludwigia peruviana* and *Anemopaegma chamberlaynii* (Bignoniaceae) hanging down steep banks running over rocks on the densely wooded hillsides.

The trees include species of *Schinus*, which have been introduced to commerce and are now grown worldwide as Pink Pepper; more species of *Acacia* and *Prosopis*; and *Sapium* in the *Euphorbia* family. A real delight are big specimens of the southern walnut, *Juglans australis* (fig. 26). Shrubby solanums and *Baccharis* occur in the understory, and in the higher parts of the valley *Heimia salicifolia* is abundant. Among the herbaceous plants are a rather undistinguished white-flowered *Begonia cucullata*, *Commelina* sp. and the very tall *Eryngium elegans*. *Lamprothyrus hieronymi*, a grass closely related to *Cortaderia* (Pampas Grass) and sometimes seen in cultivation in Britain, makes a pleasing show as it cascades down rocky banks by the roadside. On the verge is also a handsome 1m-tall herbaceous legume with mauve flowers, *Desmodium cuneatum*. At the lowest point the valley opens out and joins the road to Tucuman, passing stretches of agricultural land with fields of sugar cane, bananas and citrus.

Climbing up out of Tafi are hedgerows lined with *Iochroma australe* which make some fine specimens despite being grazed by goats, llamas and horses. The best botanising at this altitude is in quite deep little gorges with steep sides running a short distance into the mountain sides so not easily grazed (fig. 27), and here is found one of the highlights



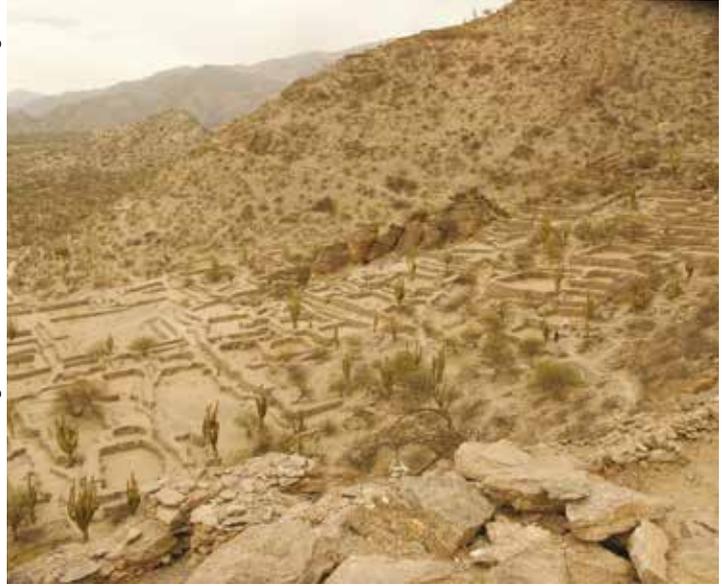
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Fig. 29 *Ipomoea* species



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Fig. 30 *Calceolaria fiebrigiana*



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Fig. 31 The ruins of the pre-Columbian city of Quilmes are managed to protect native flora.

of our planthunting: *Bomarea macrocephala* (fig. 28), an *Alstroemeria* relative with 2m-tall arching stems ending in clusters of rich-pink flowers. We had seen one of two specimens in scrub further north, but it is common in these small depressions in the hillsides. A flamboyant creeping *Ipomoea* species (fig. 29) with lilac-mauve flowers was abundant on drier areas, and a striking species of *Nierembergia* with a dark-blue cupped centre to the flower is eye-catching, while in damp ground is *Anagallis alternifolia* and *Calceolaria fiebrigiana* (fig. 30) with its broad leaves and

clusters of flowers rather different from the species found in Patagonia. Two shrubs occur in these gorges: *Kageneckia lanceolata* in the Rose family and the yellow-flowered *Balbisia calycina* now placed in the Geranium family.

Leaving Tafi and starting the long journey back to Salta we visited the ruins of Quilmes (fig. 31), an archaeological site in the Calchaqui Valleys, Tucuman province. There is evidence of habitation dating back to 5000BC but when the people irrigated the valley in about 850AD it is believed to have had a population of some 5000. It is the largest

pre-Columbian settlement in Argentina, occupying some 30 hectares. This national monument was fascinating, and noteworthy for the sensitive preservation of tree cacti and some other interesting species including clumps of *Puya* species on the rocky paths.

We continued to Cafayate, to a small, family-run hotel where we'd stayed before. A swim in the open-air hotel pool was a pleasant relief after the dust of the roads, and in the warm evening a good dinner on the pavement of the town square prepared us for the journey to Salta and our flight back to Buenos Aires and home. 🌸

Lorna and Keith Ferguson are retired professional botanists who still enjoy travelling in search of plants when they can escape from their extensive garden.