Plant Formations in the Patagonian BioProvince

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Patagonian Occidental Semi-Desert and Steppe
This zone extends in a strip 100-120 km wide from Neuge’n Province to the northwest corner of Santa Cruz. The dominant plants are tussock grasses, with Stipa species such as S. humilis and S. speciosa, well represented. Other grasses include Bromus setifolius, Hordeum comosum, Poa lanuginosa and the endemic or near endemic Festuca argentina (Poaceae). However, the colour of this formation is rarely green being usually characterized by tones of yellow, grays and brown. In fact, a large proportion of the flora has yellow flowers. The most common shrubs are Adesmia campestris, Senecio filaginoides and the near endemic Mulinum spinosum (Apiaceae), but the tallest shrubs are Berberis cuneata and B. heterophylla. These latter species are also distinguished by their deep green colour. Other common shrubs include Lycium chilense, Nardophyllum obtusifolium, Schinus polygamus, Verbena ligustrina and the endemic Acantholippia seriphioides (Verbenaceae). Occasionally in the central part of this zone the endemic or near endemic Sapium patagonicum (Euphorbiaceae) predominates. It is a strange leafless plant with branches emerging from the centre of the plant, and is also poisonous. There are also several cacti such as the endemic Mahuenia patagonica (Cactaceae) and here represent the southernmost members of the family. The field layer includes a rich assemblage of herbaceous species. These typically include sedges such as the Carex andina and the endemic Carex argentina (Cyperaceae) and a variety of forbs. Among the endemic or near endemic are Arjona patagonica (Santalaceae), Gilia patagonica (Polemoniaceae), Loasa argentina (Loasaceae), Plantago patagonica (Plantaginaceae) and Polygala darwiniana (Polylagaceae). However, these semi-deserts show considerable variations in terms of both composition and physiognomy. In certain valleys, for example, there are saline soils subject to occasional flooding. Here the conspicuous taxa include Puccinellia skottsbergii, species of Distichlis, and the endemic or near endemic Lycium repens (Solanaceae), Nitrophila australis (Amaranthaceae) and Suaeda patagonica (Chenopodaceae).

Patagonian (Chubutian) Semi-Desert and Steppe
This zone includes much of Chubut extending south from the Rio Negra to a broad transitional zone around the border with Santa Cruz. On the plains, plateaus and hills the vegetation is dominated by the grasses Poa ligularis, Stipa humilis and S. speciosa together with the endemic composites Chuquiraga avellanda, Nassauvia glomerulosa and N. ulicina (Asteraceae) although much of it is very sparse. Chuquiraga is a shrub with spiny leaves and can reach heights of about 60 cm, while Nassauria species are dwarf cushion plants. Nassauvia glomerulosa often mimics the shape and colour of pebbles. Another characteristic species include the endemic Pleurophora patagonia (Lythraceae). This attractive plant is often covered in pink flowers during summer. Where saline conditions prevail, halophytes such as the endemic Atriplex lampa, A. sagittifolia (Chenopodiaceae) and Frankenicia patagonica (Frankeniaceae) predoinate. However, these areas tend to be sparsely vegetated and represent some of the most desert-like landscapes in Patagonia. So-called badlands can also be found around the Sarmiento Basin. Here endemic species such as Ameghinoa patagonica (Asteraceae) and Nicotiana ameghinoi (Solanaeaceae) occur.

Patagonian (Santacruzian) Semi-Desert and Steppe
This arid formation extends from 46 to 51 degrees south from the coast to the Andes. It has strong affinities with the Chubutian zone but lacks Chuquiraga avellandae. Here it is
replaced by *Verbena tridens* as one of the main dominants, which can grow to a height of about 100 cm. The principal vegetation is shrub steppe in which species such as *Brachyclados caespitosus*, *Mulinum microphyllum* and the endemic *Acantholippa seriphioides* (Verbenaceae) and *Chuquiraga aurea* (Asteraceae) are characteristic. Bunchgrass including *Stipa humilis*, *S. speciosa* and *S. chrysophylla* is also common together with the feathered spiked grasses like *Stipa neaei*, *S. psylanthra* and *S. subplumosa*. In hilly areas *Acanthophyllum rigidum*, *Berberis heterophylla*, *Lycium chilense*, *Nardophyllum obtusifolium*, *Schinus polygamus* and *Verbena ligustrina* become more frequent but none of them dominate.

**Patagonian (San Jorge Gulf) Semi-Desert and Steppe**

This zone forms a narrow arc bordering the Gulf of San Jorge stretching from Cabo Raso to Punta Casamayor, and comprises plateaus and many narrow valleys. Much of the vegetation consists of dense scrub dominated by *Colliguaya integerrima* and the endemic or near endemic *Trevoa patagonica* (Rhamnaceae). Other shrubs include *Adesmia campestris*, *Anarthrophyllum rigidum* and the endemic *Ephedra ochreata* (Ephedraceae). *Ephedra* is the only genus of gymnosperm in Patagonia and can be an important component of the vegetation in places. Beneath the open canopy the herbaceous field layer is usually dominated by grass in which species of *Stipa* are important but the annual grass *Vulpia dertonensis* may also form extensive patches in spring. Other herbaceous species include *Amsinckia hispida*, *Calceolaria lanceolata*, *Huanaca acaulis*, *Microsteris gracilis*, *Oenothera contorta*, *Plagiobotris calandriinioides* and *Silene magellanica*. A number of climbing species may also be present including the endemic *Loasa argentina* (Loasaceae), *Magallana porifolia* (Tropaeolaceae) and *Mutisia retrorsa* (Asteraceae). At high elevations on the Del Castillo Plateau the vegetation changes. Here grasses such as *Festuca argentina*, *F. pallescens* and *Poa ligularis* mainly dominate. However, the winds here are stronger than anywhere else in Patagonia and this no doubt acts as a limiting factor for many species. Shrubs therefore are few in number, but cushion plants are well represented. Typical amongst these are *Brachyclados caespitosus*, *Cruckshanksia glacialis* and the endemic or near endemic *Benthamiella patagonica* (Solanaceae). These high plateaus also provide habitat for the endemic *Larrea ameghinoi* (Zygophyllaceae), which is the southernmost limit of the genus. It is also the only species in the genus that has a carpet-like habit.

Further information required.

**References**


