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The Catalogue of Vascular Plants of the *Southern Cone* and the Flora of Argentina: their contribution to the World Flora

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Abstract

The checklist of the vascular plants of the *Southern Cone* presents updated information of 19,787 taxa and 44,943 synonyms, distributed in 2,679 genera and 318 families. This checklist was prepared, and its permanently updated, using the database "Documenta Florae Australis", with the contribution of numerous researchers and institutions, and constitutes the bases for the *Flora of Argentina*, currently under preparation. Here we evaluate the current knowledge of vascular plants in the *Southern Cone* and provide a summary of the ongoing *Flora of Argentina*, and the significance of these projects for the *World Flora* on line and to the botanical studies in the region.

Key words: Endemism, Flora, South America, *Southern Cone*.

Resumen

A listagem das plantas vasculares do Cone Sul apresenta 19.787 táxons com 44.943 sinônimos, distribuídos em 2.679 gêneros e 318 famílias. Preparada e continuamene atualizada utilizando o banco de dados "Documenta florae Australis", com a contribuição de vários pesquisadores e instituições, esta lista constitui a base para a Flora da Argentina, atualmente em preparação. Aqui avaliamos o conhecimento atual das plantas vasculares no Cone Sul e fornecemos um resumo sobre o andamento da Flora da Argentina, além da importância destes projetos para a Flora do Mundo Online e para os estudos botânicos na região.

Palavras clave: *Cono Sur*, Endemismo, Flora, Sudamérica.

Introduction

The *Catálogo de las Plantas Vasculares del Cono Sur* presents a critical, commented list of the species and infraspecific taxa that occur in the extreme south of the Americas, comprising the totality of Argentina, southern Brazil (Paraná, Santa Catarina and Rio Grande do Sul states), Chile, Paraguay and Uruguay, including the majority of the subtropical and temperate to cold-temperate areas approximately south of 20ºS. The land area is equivalent to 4,708,617 km^2, representing 26% of the total land area of South America (Fig. 1).

This project was preceeded by the *Catálogo de Plantas Vasculares de la República Argentina* (Zuloaga *et al.* 1994; Zuloaga & Morrone 1996, 1999), and started in 2001 at the Instituto de Botánica Darwinion (SI), Buenos Aires, Argentina, in collaboration with the Missouri Botanical Garden (MO), the Herbarium of the Universidad de Concepción (CONC), Chile, Herbarium of the Facultad de Agronomía (MVFA), Montevideo, Uruguay, the Herbarium of the Facultad de Ciencias Químicas (FCQ), Asunción, Paraguay and the Botany Departament of the Universidade Federal do Rio Grande do Sul (ICN), Porto Alegre, Brazil, involving numerous contributors from different botanical institutions. The resulting critical list of vascular plants from the *Southern Cone*, or *Cono Sur* in Spanish, was published in a printed version (Zuloaga *et al.* 2008), while the digital version is continuously updated and available for public searches through the Instituto Darwinion's webpage (<http://www.darwin.edu.ar/Proyectos/FloraArgentina/fa.htm>).

During the year 2008, using as a base the existing *Catálogo del Cono Sur* and other

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Figure 1 – Study area, the *Southern Cone* of South America (Argentina, Southern Brazil, Chile, Paraguay, and Uruguay).

previous projects carried out in Argentina (Floras of Buenos Aires, Chaqueña, Entre Ríos, Jujuy, Patagonia, San Juan) and also the *Proflora* project (Hunziker 1994-2001; Anton & Zuloaga 2001-2005), the production and publication of a new *Flora vascular de la República Argentina* (from now on *Flora of Argentina*) begun. This work was planned to comprise 20 volumes and is currently underway, with an electronic version available at (<http://www.floraargentina.edu.ar>). The web version incorporates additional information such as distribution maps, photographs of live plants in the field and complete list of examined specimens. To date, the published volumes of *Flora of Argentina* include Poaceae (Zuloaga *et al.* 2012), Asteraceae (parts 1, tribes Anthemideae to Gnaphalieae and 3, tribes Senecioneae and Vernonieae) (Zuloaga *et al.* 2014a, b), Brassicaceae (Anton & Zuloaga 2012a), Solanaceae (Zuloaga *et al.* 2013) and Verbenaceae (Anton & Zuloaga 2012b); the volumes regarding Basal Dicotyledoneae (published in September 2015) and Asteraceae (volume 7(2) is in press).

This contribution updates the floristic information found in the *Catálogo de las plantas vasculares del Cono Sur* (Zuloaga *et al*. 2008), particularly concerning data from Argentina, as the ongoing preparation of the *Flora of Argentina*, directed by A. M. Anton (CORD) & F. O. Zuloaga (SI), including analyses and floristic comments that will lead to future systematic works in the region, and to the integration of these projects into the *World Flora online* by 2020.

Methodology

The present work used the database "Documenta Florae Australis" (from now on referred as DFA), developed and maintained at the Instituto Darwinion during the last 20 years. Such relational database integrates scientific name of the accepted taxa with their synonyms, indicates original publication data, presence and distribution in each country of the South American *Southern Cone* (discriminating by regions, provinces or states, departments or municipalities), status (if the taxon is endemic, native or introduced), habit and life-cycle, including also bibliography and vouchers, line drawings and field photographs. A complete inventory of the vascular plants cited for the *Southern Cone* can be obtained from DFA. As soon as new taxonomic and systematic treatments are published, DFA data is updated and its records are increased daily by the contribution of numerous registered users. Also, more than 15 institutions are digitalising their collections and these are continuously uploaded into this system. Today, DFA has 66,784 scientific names recorded for the *Southern Cone*, of which 19,787 are accepted and the remaining 44,943 are synonyms. The number of herbarium specimens linked to the system is 442,155, the bibliography records amount to 10,005, while 12,554 names of taxonomists, collectors or botanical authorities, close to 9,000 line art illustrations and 35,000 pictures of plants in the field, amongst other items, are included in DFA. This database is open and available for consultation and represents a valuable resource for improving knowledge, management and conservation of the flora of Southern South America.

Angiosperm families from the *Southern Cone* were organized according to the *Angiosperm Phylogeny Group* available at (<http://www.mobot.org/MOBOT/research/APweb/>), with a few punctual exceptions where the specialists preferred to maintain the traditional classification, such as the Chenopodiaceae, that remains separate from the

Amaranthaceae. For the Ferns and allies the system of R. M. Tryon & A. F. Tryon (1982) was followed, with subsequent modifications and updates (in the classification of families and genera).

Distributional analysis of taxa followed the Biogeographical scheme proposed by Josse *et al*. (2003) (Fig. 2) with slight modifications.

Results and Discussion

A figure of 19,787 taxa, distribuited in 18,139 species, 2,679 genera and 318 families is currently recorded for the *Southern Cone*, 7,787 species are endemic to the region (Tab. 1). The Angiosperms comprise 95.40% of the vascular flora (70.68% Dicots and 24,72% Monocots) including the majority of the endemic species from the *Southern Cone* (7,630 species, or 85.08% of the total).

The significant difference found between the present results and those published in the *Catálogo del Cono Sur* (Zuloaga *et al*. 2008: xxxviii), considering that a short period of time has elapsed between those milestones, points out the importance of keeping the floristic and taxonomic information available online and permanently updated. The total of families in 2008 was 308, with 2,586 genera and 17,693 species, of which 7,691 were endemic. The increase in family numbers was 10 while the genera increased by 93, with 446 additional species; of these, 96 more were endemic. There are several possible causes to explain this variation: description of new taxa, record of new occurrences for the area or adjustment of taxonomic circumscription at all levels, often as a result of new taxonomic and phylogenetic research. Therefore the species number accepted within a certain genus may decrease when new synonymies are proposed, as seen in genus *Phyla* L. (O'Leary & Múlgura 2012) or it may increase through the description of new species, as was the case with *Chusquea* Kunth, through the description of *Chusquea egluma* Guerreiro & Rúgolo and *Chusquea floribunda* Guerreiro & Rúgolo in 2013 (Guerreiro & Rúgolo de Agrasar 2013). The number of genera may increase through segregation of a group of species to another genus, as seen in 2014 for *Panicum validum* Mez that was split from *Panicum* L. and placed within the new genus *Osvaldoa* J.R. Grande (Grande Allende 2014), causing an increase in the number of genera in the Poaceae. The number of families may also decrease, as it is the case of the Nolanaceae and Sclerophylacaceae, nowadays considered as part of the Solanaceae.

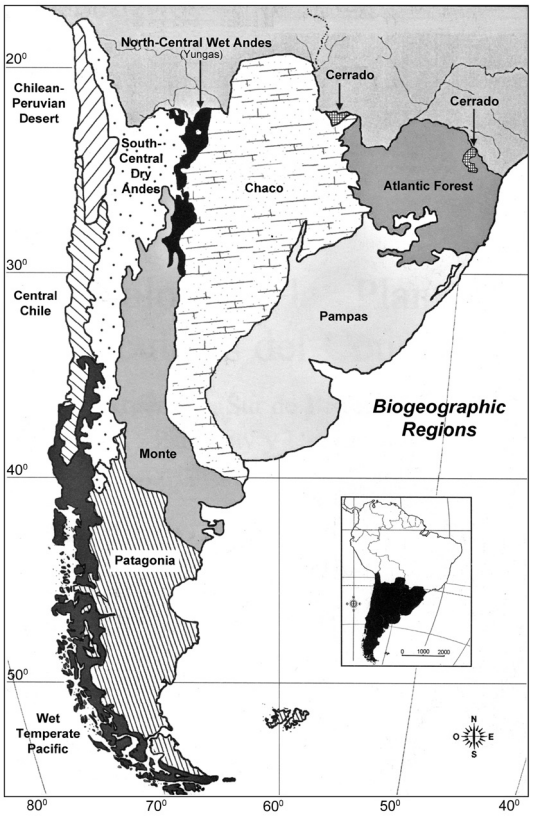

Figure 2 – Biogeographic regions of the *Southern Cone* of South America.

Table 1 – *Southern Cone*, summary of the taxa included in the catalogue.

Group	Families	Genera	Species	% Species	Endemics	% Endemics
Pteridophyta	36	124	804	4,43	152	18,91
Gymnospermae	5	12	30	0,17	5	16,67
Dicotyledoneae	220	1929	12821	70,68	5867	45,76
Monocotyledoneae	57	614	4484	24,72	1763	39,32
Total	318	2679	18139		7787	

Table 2 – Argentina, summary of the taxa recorded for the country.

Group	Families	Genera	Species	% Species	Endemics	%Endemics
Pteridophyta	34	97	390	3,90	16	4,10
Gymnospermae	5	12	26	0,26	1	3,85
Dicotyledoneae	194	1519	7162	71,58	1383	19,31
Monocotyledoneae	50	462	2428	24,27	349	14,37
Total	283	2090	10006		1749	

For the *Flora of Argentina*, there is a current record of 10,944 taxa distributed in 10,006 species, 2,090 genera and 283 families, with a total of 1,749 endemic species (Tab. 2) representing 17.48% of the country's flora.

Plant diversity at family level

The largest family in terms of species number in the *Southern Cone* is Asteraceae (2,523 species), followed by Poaceae (1,535), Fabaceae (1,365), Orchidaceae (1,042), Solanaceae (546), Cyperaceae (485), Euphorbiaceae (447), Malvaceae (408), Cactaceae (406) and Apocynaceae (333). These families comprise 50% of the species found in the area. Contrastingly, 202 families are represented by 15 or less species, of which 59 have a single species in the area. A complete list of the families verified for the *Southern Cone* is presented in Table 3, indicating the genus, species and endemic species number for each, together with the percentage of endemic species in relation to the total number of species in the family.

Argentina has a similar representation at family level to what is found in the *Southern Cone* (55.16% of the species from the *Southern Cone* are present in Argentina); the top ten families are Asteraceae (1,502 species), Poaceae (1,170), Fabaceae (760), Solanaceae (322), Cyperaceae (314), Orchidaceae (281), Cactaceae (240), Malvaceae (233), Brassicaceae (229) and Euphorbiaceae (218); 202 families with 15 or less species among which 68 have a single representative in the country (Tab. 4).

Plant diversity at genus level

Among the 2,679 genera found in the *Southern Cone*, the largest one is *Senecio* L. (Asteraceae, 415 species), followed by *Solanum* L. (Solanaceae, 213), *Baccharis* L. (Asteraceae, 208), *Adesmia* DC. (Fabaceae, 199), *Mimosa* L. (Fabaceae, 169), *Croton* L. (Euphorbiaceae, 126), *Oxalis* L. (Oxalidaceae, 124), *Eugenia* L. (Myrtaceae, 122), *Carex* L. (Cyperaceae, 110), *Paspalum* L. (Poaceae, 109), *Viola* L. (Violaceae, 107) and *Sisyrinchium* L. (Iridaceae, 103). The remaining genera have 100 or less species recorded for the region.

Particularly, for the *Flora of Argentina*, the richest genus in number of species is *Senecio* (with 260 species), followed by *Solanum* (126), *Adesmia* (102), *Baccharis* (101), *Paspalum* (77), *Oxalis* (71), *Astragalus* L. (69), *Mimosa* (53), *Viola* (53), *Valeriana* L. (48), *Polygala* L. (44) and *Calceolaria* L. (41). In the other side of the spectrum, 949 genera (45.40 % of the total) are represented by a single species in Argentina.

Endemism

A species or taxon is considered 'endemic' in the present work when its distribution is known only for the area of this project. Thus, for the *Southern Cone,* there are eight endemic families (3.25% of the total number of families): Francoaceae, Gomortegaceae and Lactoridaceae, known only in Chile, Halophytaceae, exclusive from Argentina and Aextoxicaceae, Misodendraceae, Philesiaceae and Tribelaceae, shared between Argentina and Chile. The number of endemic genera for the region is 241 (9% of the total genera) and the family with the largest number of endemic genera is Asteraceae, with 46 endemic genera, followed by Amaryllidaceae (16), Brassicaceae (13), Apiaceae (11), Cactaceae (10), Solanaceae (9), Poaceae (9), Alliaceae (8) and Fabaceae (6). Table 5 details the endemic genera with species number and their presence in each country. The total of endemic species in the *Southern Cone* is 7,787, representing 42,93 % of the total plant species found in the region.

Meanwhile, for the *Flora of Argentina*, the only endemic family is the monotypic

Table 3 – *Southern Cone*, number of families, genera, species, and endemic species.

Group	Family	Genera	Species	Endemics	% Endemism
Dicotyledoneae	Acanthaceae	20	124	28	22,6
Dicotyledoneae	Aceraceae	1	2		
Dicotyledoneae	Achariaceae	1	1		
Dicotyledoneae	Achatocarpaceae	1	5	2	40,0
Dicotyledoneae	Adoxaceae	2	3		
Dicotyledoneae	Aextoxicaceae	1	1	1	100,0
Monocotyledoneae	Agapanthaceae	1	1		
Monocotyledoneae	Agavaceae	2	3		
Dicotyledoneae	Aizoaceae	7	20	9	45,0
Monocotyledoneae	Alismataceae	4	18	3	16,7
Monocotyledoneae	Alstroemeriaceae	3	56	42	75,0
Dicotyledoneae	Amaranthaceae	12	140	43	30,7
Monocotyledoneae	Amaryllidaceae	29	294	247	84,0
Dicotyledoneae	Anacampserotaceae	2	3	3	100,0
Dicotyledoneae	Anacardiaceae	10	49	18	36,7
Pteridophyta	Anemiaceae	1	14	1	7,1
Dicotyledoneae	Annonaceae	5	28	6	21,4
Monocotyledoneae	Anthericaceae	2	8	3	37,5
Dicotyledoneae	Apiaceae	48	225	133	59,1
Dicotyledoneae	Apocynaceae	61	333	122	36,6
Monocotyledoneae	Aponogetonaceae	1	1		
Dicotyledoneae	Aquifoliaceae	1	12	8	66,7
Monocotyledoneae	Araceae	21	58	9	15,5
Dicotyledoneae	Araliaceae	6	13	2	15,4
Gymnospermae	Araucariaceae	1	2	1	50,0
Monocotyledoneae	Arecaceae	15	50	22	44,0
Dicotyledoneae	Aristolochiaceae	1	34	12	35,3
Monocotyledoneae	Asparagaceae	1	5		
Monocotyledoneae	Asphodelaceae	1	1		
Pteridophyta	Aspleniaceae	2	65	7	10,8
Monocotyledoneae	Asteliaceae	1	1	1	100,0
Dicotyledoneae	Asteraceae	327	2523	1444	57,2
Pteridophyta	Athyriaceae	3	19		
Dicotyledoneae	Avicenniaceae	1	1		
Pteridophyta	Azollaceae	1	2		
Dicotyledoneae	Balanophoraceae	4	5		
Dicotyledoneae	Balsaminaceae	1	3		
Dicotyledoneae	Basellaceae	2	4		
Dicotyledoneae	Begoniaceae	1	55	36	65,5
Dicotyledoneae	Berberidaceae	1	34	31	91,2
Dicotyledoneae	Berberidopsidaceae	1	1	1	100,0

Group	Family	Genera	Species	Endemics	% Endemism
Dicotyledoneae	Betulaceae	2	3		
Dicotyledoneae	Bignoniaceae	29	124	19	15,3
Dicotyledoneae	Bixaceae	1	1		
Pteridophyta	Blechnaceae	2	36	11	30,6
Dicotyledoneae	Bombacaceae	5	12		
Dicotyledoneae	Boraginaceae	31	214	106	49,5
Dicotyledoneae	Brassicaceae	71	302	180	59,6
Monocotyledoneae	Bromeliaceae	24	302	147	48,7
Monocotyledoneae	Burmanniaceae	6	9		
Dicotyledoneae	Burseraceae	2	3	1	33,3
Dicotyledoneae	Cabombaceae	1	2		
Dicotyledoneae	Cactaceae	55	406	290	71,4
Dicotyledoneae	Calceolariaceae	2	88	68	77,3
Dicotyledoneae	Callitrichaceae	1	9	4	44,4
Dicotyledoneae	Calyceraceae	6	48	43	89,6
Dicotyledoneae	Campanulaceae	10	51	17	33,3
Dicotyledoneae	Canellaceae	2	2	1	50,0
Dicotyledoneae	Cannabaceae	1	2		
Monocotyledoneae	Cannaceae	1	5	1	20,0
Dicotyledoneae	Capparaceae	10	25	4	16,0
Dicotyledoneae	Caprifoliaceae	2	2		
Dicotyledoneae	Cardiopteridaceae	1	6	1	16,7
Dicotyledoneae	Caricaceae	2	6	1	16,7
Dicotyledoneae	Caryocaraceae	1	1		
Dicotyledoneae	Caryophyllaceae	27	174	83	47,7
Dicotyledoneae	Cecropiaceae	3	4		
Dicotyledoneae	Celastraceae	13	33	8	24,2
Dicotyledoneae	Celtidaceae	2	5		
Monocotyledoneae	Centrolepidaceae	1	1	1	100,0
Dicotyledoneae	Ceratophyllaceae	1	2		
Dicotyledoneae	Cervantesiaceae	2	3	1	33,3
Dicotyledoneae	Chenopodiaceae	17	125	60	48,0
Dicotyledoneae	Chloranthaceae	1	1		
Dicotyledoneae	Chrysobalanaceae	4	6		
Dicotyledoneae	Cistaceae	1	1	1	100,0
Dicotyledoneae	Clethraceae	1	2	1	50,0
Dicotyledoneae	Clusiaceae	5	7		
Dicotyledoneae	Cochlospermaceae	1	2		
Dicotyledoneae	Combretaceae	5	16	4	25,0
Monocotyledoneae	Commelinaceae	8	29	2	6,9
Dicotyledoneae	Connaraceae	2	2		
Dicotyledoneae	Convolvulaceae	14	198	77	38,9
Dicotyledoneae	Coriariaceae	1	1	1	100,0
Monocotyledoneae	Corsiaceae	1	1	1	100,0

Group	Family	Genera	Species	Endemics	% Endemism
Monocotyledoneae	Costaceae	1	3		
Dicotyledoneae	Crassulaceae	4	17	5	29,4
Dicotyledoneae	Cucurbitaceae	24	79	16	20,3
Dicotyledoneae	Cunoniaceae	3	9	2	22,2
Gymnospermae	Cupressaceae	4	4	3	75,0
Pteridophyta	Cyatheaceae	3	17		
Monocotyledoneae	Cyclanthaceae	1	2	1	50,0
Monocotyledoneae	Cymodoceaceae	1	1		
Monocotyledoneae	Cyperaceae	33	485	162	33,4
Pteridophyta	Dennstaedtiaceae	5	14	1	7,1
Dicotyledoneae	Desfontainiaceae	1	1		
Pteridophyta	Dicksoniaceae	3	5	3	60,0
Pteridophyta	Didymochlaenaceae	1	1		
Dicotyledoneae	Dilleniaceae	4	11		
Monocotyledoneae	Dioscoreaceae	1	85	53	62,4
Dicotyledoneae	Dipsacaceae	3	5		
Dicotyledoneae	Donatiaceae	1	1	1	100,0
Dicotyledoneae	Droseraceae	1	6	1	16,7
Pteridophyta	Dryopteridaceae	15	120	32	26,7
Dicotyledoneae	Ebenaceae	1	3	1	33,3
Dicotyledoneae	Elaeagnaceae	1	1		
Dicotyledoneae	Elaeocarpaceae	4	10	4	40,0
Dicotyledoneae	Elatinaceae	1	2	1	50,0
Dicotyledoneae	Empetraceae	1	1		
Dicotyledoneae	Epacridaceae	1	1	1	100,0
Gymnospermae	Ephedraceae	1	12	8	66,7
Pteridophyta	Equisetaceae	1	2		
Dicotyledoneae	Eremolepidaceae	3	3	2	66,7
Dicotyledoneae	Ericaceae	5	39	21	53,8
Monocotyledoneae	Eriocaulaceae	5	40	20	50,0
Dicotyledoneae	Erythroxylaceae	1	19	4	21,1
Dicotyledoneae	Escalloniaceae	2	29	18	62,1
Dicotyledoneae	Eucryphiaceae	1	2	2	100,0
Dicotyledoneae	Euphorbiaceae	40	447	205	45,9
Dicotyledoneae	Fabaceae	160	1365	624	45,7
Dicotyledoneae	Francoaceae	2	2	2	100,0
Dicotyledoneae	Frankeniaceae	1	10	6	60,0
Dicotyledoneae	Fumariaceae	1	7		
Dicotyledoneae	Gentianaceae	15	57	21	36,8
Dicotyledoneae	Geraniaceae	2	26	10	38,5
Dicotyledoneae	Gesneriaceae	10	48	18	37,5
Pteridophyta	Gleicheniaceae	3	18	4	22,2
Dicotyledoneae	Gomortegaceae	1	1	1	100,0

Group	Family	Genera	Species	Endemics	% Endemism
Dicotyledoneae	Goodeniaceae	2	2		
Dicotyledoneae	Griseliniaceae	1	5	4	80,0
Dicotyledoneae	Grossulariaceae	1	12	10	83,3
Dicotyledoneae	Gunneraceae	1	11	7	63,6
Dicotyledoneae	Halophytaceae	1	1	1	100,0
Dicotyledoneae	Haloragaceae	4	6	2	33,3
Monocotyledoneae	Heliconiaceae	1	6		
Monocotyledoneae	Hemerocallidaceae	1	1		
Monocotyledoneae	Herreriaceae	2	6	5	83,3
Dicotyledoneae	Hippuridaceae	1	1		
Dicotyledoneae	Humiriaceae	1	1		
Monocotyledoneae	Hyacinthaceae	1	5	1	20,0
Dicotyledoneae	Hydnoraceae	1	2		
Dicotyledoneae	Hydrangeaceae	1	1	1	100,0
Monocotyledoneae	Hydrocharitaceae	5	7		
Dicotyledoneae	Hydroleaceae	1	2		
Pteridophyta	Hymenophyllaceae	6	68	23	33,8
Dicotyledoneae	Hypericaceae	1	28	14	50,0
Monocotyledoneae	Hypoxidaceae	3	5	1	20,0
Dicotyledoneae	Icacinaceae	1	1	1	100,0
Monocotyledoneae	Iridaceae	27	220	148	67,3
Pteridophyta	Isoëtaceae	1	20	15	75,0
Dicotyledoneae	Juglandaceae	2	2		
Monocotyledoneae	Juncaceae	7	64	26	40,6
Monocotyledoneae	Juncaginaceae	3	5	1	20,0
Dicotyledoneae	Krameriaceae	1	3	1	33,3
Dicotyledoneae	Lacistemataceae	1	3		
Dicotyledoneae	Lactoridaceae	1	1	1	100,0
Dicotyledoneae	Lamiaceae	42	220	78	35,5
Dicotyledoneae	Lardizabalaceae	2	2	2	100,0
Dicotyledoneae	Lauraceae	11	76	9	11,8
Monocotyledoneae	Laxmanniaceae	1	2	2	100,0
Dicotyledoneae	Lecythidaceae	1	1		
Dicotyledoneae	Ledocarpaceae	1	9	6	66,7
Monocotyledoneae	Lemnaceae	5	11		
Dicotyledoneae	Lentibulariaceae	3	25	2	8,0
Monocotyledoneae	Limnocharitaceae	2	6		
Dicotyledoneae	Linaceae	2	17	5	29,4
Dicotyledoneae	Linderniaceae	2	3		
Pteridophyta	Lindsaeaceae	1	10		
Dicotyledoneae	Loasaceae	7	69	49	71,0
Dicotyledoneae	Loganiaceae	2	29	12	41,4
Pteridophyta	Lomariopsidaceae	2	2		

Group	Family	Genera	Species	Endemics	% Endemism
Dicotyledoneae	Loranthaceae	7	12	6	50,0
Monocotyledoneae	Luzuriagaceae	1	3	3	100,0
Pteridophyta	Lycopodiaceae	9	37	13	35,1
Pteridophyta	Lygodiaceae	1	2		
Dicotyledoneae	Lythraceae	8	64	16	25,0
Dicotyledoneae	Malesherbiaceae	1	16	15	93,8
Dicotyledoneae	Malpighiaceae	31	116	23	19,8
Dicotyledoneae	Malvaceae	45	408	173	42,4
Monocotyledoneae	Marantaceae	6	13	2	15,4
Pteridophyta	Marattiaceae	3	5		
Dicotyledoneae	Marcgraviaceae	2	2		
Pteridophyta	Marsileaceae	3	5	1	20,0
Dicotyledoneae	Martyniaceae	2	4	2	50,0
Monocotyledoneae	Mayacaceae	1	2		
Dicotyledoneae	Melastomataceae	26	225	43	19,1
Dicotyledoneae	Meliaceae	5	22	2	9,1
Dicotyledoneae	Menispermaceae	5	15	1	6,7
Dicotyledoneae	Menyanthaceae	1	2		
Dicotyledoneae	Microteaceae	1	5		
Dicotyledoneae	Misodendraceae	1	8	8	100,0
Dicotyledoneae	Molluginaceae	2	3		
Dicotyledoneae	Monimiaceae	4	21	5	23,8
Dicotyledoneae	Montiaceae	8	58	49	84,5
Dicotyledoneae	Moraceae	8	31	1	3,2
Dicotyledoneae	Muntingiaceae	1	1		
Dicotyledoneae	Myoporaceae	1	1		
Dicotyledoneae	Myricaceae	1	2		
Dicotyledoneae	Myristicaceae	1	1		
Dicotyledoneae	Myrsinaceae	3	18	3	16,7
Dicotyledoneae	Myrtaceae	28	313	139	44,4
Monocotyledoneae	Najadaceae	1	3		
Dicotyledoneae	Nanodeaceae	1	1	1	100,0
Pteridophyta	Nephrolepidaceae	1	6		
Dicotyledoneae	Nolanaceae	1	50	45	90,0
Dicotyledoneae	Nothofagaceae	3	10	10	100,0
Dicotyledoneae	Nyctaginaceae	10	37	7	18,9
Dicotyledoneae	Nymphaeaceae	3	10		
Dicotyledoneae	Ochnaceae	2	7		
Dicotyledoneae	Olacaceae	1	2		
Dicotyledoneae	Oleaceae	6	17	2	11,8
Pteridophyta	Oleandraceae	1	1	1	100,0
Dicotyledoneae	Onagraceae	7	95	30	31,6
Pteridophyta	Ophioglossaceae	2	12	2	16,7

Group	Family	Genera	Species	Endemics	% Endemism
Dicotyledoneae	Opiliaceae	1	2		
Monocotyledoneae	Orchidaceae	158	1042	294	28,2
Dicotyledoneae	Orobanchaceae	11	59	24	40,7
Pteridophyta	Osmundaceae	2	3		
Dicotyledoneae	Oxalidaceae	2	126	73	57,9
Dicotyledoneae	Papaveraceae	6	14	2	14,3
Pteridophyta	Parkeriaceae	1	1		
Dicotyledoneae	Parnassiaceae	1	1		
Dicotyledoneae	Passifloraceae	1	43	3	7,0
Dicotyledoneae	Pentaphylacaceae	1	2		
Monocotyledoneae	Philesiaceae	2	2	2	100,0
Dicotyledoneae	Phrymaceae	3	9	6	66,7
Dicotyledoneae	Phyllanthaceae	5	26	3	11,5
Dicotyledoneae	Phytolaccaceae	10	22	6	27,3
Dicotyledoneae	Picrodendraceae	1	1		
Gymnospermae	Pinaceae	2	4		
Dicotyledoneae	Piperaceae	4	136	34	25,0
Dicotyledoneae	Plantaginaceae	28	154	63	40,9
Dicotyledoneae	Plumbaginaceae	4	6	4	66,7
Monocotyledoneae	Poaceae	201	1535	542	35,3
Gymnospermae	Podocarpaceae	4	8	5	62,5
Dicotyledoneae	Podostemaceae	10	19	8	42,1
Dicotyledoneae	Polemoniaceae	9	13	4	30,8
Dicotyledoneae	Polygalaceae	6	106	50	47,2
Dicotyledoneae	Polygonaceae	15	95	36	37,9
Pteridophyta	Polypodiaceae	17	88	5	5,7
Monocotyledoneae	Pontederiaceae	3	10		
Dicotyledoneae	Portulacaceae	2	31	17	54,8
Monocotyledoneae	Potamogetonaceae	2	12	2	16,7
Dicotyledoneae	Primulaceae	7	12	4	33,3
Dicotyledoneae	Proteaceae	7	14	6	42,9
Pteridophyta	Psilotaceae	1	1		
Pteridophyta	Pteridaceae	18	127	22	17,3
Dicotyledoneae	Quiinaceae	1	1		
Dicotyledoneae	Quillajaceae	1	2	1	50,0
Dicotyledoneae	Rafflesiaceae	1	5	1	20,0
Dicotyledoneae	Ranunculaceae	12	65	31	47,7
Dicotyledoneae	Resedaceae	1	4		
Monocotyledoneae	Restionaceae	1	1	1	100,0
Dicotyledoneae	Rhamnaceae	16	39	20	51,3
Dicotyledoneae	Rhizophoraceae	1	1		
Dicotyledoneae	Rosaceae	22	125	51	40,8
Dicotyledoneae	Rubiaceae	62	293	87	29,7

Group	Family	Genera	Species	Endemics	% Endemism
Monocotyledoneae	Ruppiaceae	1	3		
Monocotyledoneae	Ruscaceae	1	1		
Dicotyledoneae	Rutaceae	13	29	3	10,3
Dicotyledoneae	Sabiaceae	1	1		
Pteridophyta	Saccolomataceae	1	3		
Dicotyledoneae	Salicaceae	8	44	14	31,8
Pteridophyta	Salviniaceae	1	4		
Dicotyledoneae	Samolaceae	1	5	3	60,0
Dicotyledoneae	Santalaceae	1	1	1	100,0
Dicotyledoneae	Sapindaceae	23	97	12	12,4
Dicotyledoneae	Sapotaceae	7	26	2	7,7
Dicotyledoneae	Saxifragaceae	5	7	4	57,1
Pteridophyta	Schizaeaceae	2	4		
Dicotyledoneae	Schlegeliaceae	1	1	1	100,0
Dicotyledoneae	Schoepfiaceae	3	21	18	85,7
Dicotyledoneae	Scrophulariaceae	5	30	13	43,3
Pteridophyta	Selaginellaceae	1	18	2	11,1
Dicotyledoneae	Simaroubaceae	6	13	3	23,1
Dicotyledoneae	Siparunaceae	1	1		
Monocotyledoneae	Smilacaceae	1	14	2	14,3
Dicotyledoneae	Solanaceae	40	496	237	47,8
Dicotyledoneae	Sphenocleaceae	1	1		
Dicotyledoneae	Sterculiaceae	7	72	16	22,2
Dicotyledoneae	Stylidiaceae	1	1	1	100,0
Dicotyledoneae	Styracaceae	1	9		
Dicotyledoneae	Symplocaceae	1	19	3	15,8
Dicotyledoneae	Talinaceae	1	5	1	20,0
Dicotyledoneae	Tamaricaceae	1	1		
Monocotyledoneae	Tecophilaeaceae	3	9	8	88,9
Pteridophyta	Tectariaceae	1	3		
Dicotyledoneae	Tetrachondraceae	1	1	1	100,0
Dicotyledoneae	Theaceae	2	2		
Pteridophyta	Thelypteridaceae	2	60	9	15,0
Dicotyledoneae	Theophrastaceae	1	1		
Dicotyledoneae	Thesiaceae	1	1		
Dicotyledoneae	Thymelaeaceae	3	8	3	37,5
Dicotyledoneae	Tiliaceae	4	15	1	6,7
Dicotyledoneae	Tribelaceae	1	1	1	100,0
Dicotyledoneae	Trigoniaceae	1	2		
Monocotyledoneae	Triuridaceae	2	2		
Dicotyledoneae	Tropaeolaceae	1	33	28	84,8
Dicotyledoneae	Turneraceae	2	31	6	19,4
Monocotyledoneae	Typhaceae	1	4		

Group	Family	Genera	Species	Endemics	% Endemism
Dicotyledoneae	Ulmaceae	1	1		
Dicotyledoneae	Urticaceae	8	40	11	27,5
Dicotyledoneae	Valerianaceae	4	88	67	76,1
Monocotyledoneae	Velloziaceae	2	3	2	66,7
Dicotyledoneae	Verbenaceae	26	244	130	53,3
Dicotyledoneae	Violaceae	5	131	107	81,7
Dicotyledoneae	Viscaceae	1	34	1	2,9
Dicotyledoneae	Vitaceae	3	16		
Pteridophyta	Vittariaceae	5	8		
Dicotyledoneae	Vivianiaceae	4	7	7	100,0
Dicotyledoneae	Vochysiaceae	3	12	2	16,7
Dicotyledoneae	Winteraceae	1	5	4	80,0
Pteridophyta	Woodsiaceae	2	3		
Dicotyledoneae	Ximeniaceae	1	2		
Monocotyledoneae	Xyridaceae	1	24	4	16,7
Monocotyledoneae	Zannichelliaceae	1	1		
Monocotyledoneae	Zingiberaceae	1	1		
Monocotyledoneae	Zosteraceae	1	1	1	100,0
Dicotyledoneae	Zygophyllaceae	9	20	10	50,0
Total		2678	18138	7798	

Table 4 – Argentina, number of families, genera, species, and endemic species.

Group	Family	Genera	Species	Endemics	%Endemics
Dicotyledoneae	Acanthaceae	16	77	6	7,8
Dicotyledoneae	Aceraceae	1	2		
Dicotyledoneae	Achatocarpaceae	1	2		
Dicotyledoneae	Adoxaceae	2	3		
Dicotyledoneae	Aextoxicaceae	1	1		
Monocotyledoneae	Agapanthaceae	1	1		
Monocotyledoneae	Agavaceae	2	3		
Dicotyledoneae	Aizoaceae	7	10	1	10,0
Monocotyledoneae	Alismataceae	4	15		
Monocotyledoneae	Alstroemeriaceae	2	13	1	7,7
Dicotyledoneae	Amaranthaceae	13	98	15	15,3
Monocotyledoneae	Amaryllidaceae	19	121	55	45,5
Dicotyledoneae	Anacampserotaceae	2	3	3	100,0
Dicotyledoneae	Anacardiaceae	6	28	6	21,4
Pteridophyta	Anemiaceae	1	7		
Dicotyledoneae	Annonaceae	2	5		
Monocotyledoneae	Anthericaceae	1	6	3	50,0
Dicotyledoneae	Apiaceae	42	150	25	16,7

Group	Family	Genera	Species	Endemics	%Endemics
Dicotyledoneae	Apocynaceae	47	198	44	22,2
Dicotyledoneae	Aquifoliaceae	1	6		
Monocotyledoneae	Araceae	13	17		
Dicotyledoneae	Araliaceae	6	8		
Gymnospermae	Araucariaceae	1	2		
Monocotyledoneae	Arecaceae	10	16	1	6,3
Dicotyledoneae	Aristolochiaceae	1	21	1	4,8
Monocotyledoneae	Asparagaceae	1	5		
Monocotyledoneae	Asphodelaceae	1	1		
Pteridophyta	Aspleniaceae	2	41	1	2,4
Monocotyledoneae	Asteliaceae	1	1		
Dicotyledoneae	Asteraceae	282	1502	372	24,8
Pteridophyta	Athyriaceae	3	8		
Pteridophyta	Azollaceae	1	2		
Dicotyledoneae	Balanophoraceae	3	4		
Dicotyledoneae	Balsaminaceae	1	2		
Dicotyledoneae	Basellaceae	2	4		
Dicotyledoneae	Begoniaceae	1	17	4	23,5
Dicotyledoneae	Berberidaceae	1	20	8	40,0
Dicotyledoneae	Betulaceae	2	3		
Dicotyledoneae	Bignoniaceae	22	57	1	1,8
Dicotyledoneae	Bixaceae	1	1		
Pteridophyta	Blechnaceae	1	22		
Dicotyledoneae	Bombacaceae	3	5		
Dicotyledoneae	Boraginaceae	25	107	14	13,1
Dicotyledoneae	Brassicaceae	63	229	61	26,6
Monocotyledoneae	Bromeliaceae	13	111	39	35,1
Monocotyledoneae	Burmanniaceae	3	5		
Dicotyledoneae	Cabombaceae	1	1		
Dicotyledoneae	Cactaceae	41	240	129	53,8
Dicotyledoneae	Calceolariaceae	1	41	10	24,4
Dicotyledoneae	Callitrichaceae	1	8		
Dicotyledoneae	Calyceraceae	6	35	12	34,3
Dicotyledoneae	Campanulaceae	8	26	2	7,7
Dicotyledoneae	Cannabaceae	1	2		
Monocotyledoneae	Cannaceae	1	4	1	25,0
Dicotyledoneae	Capparaceae	10	19		
Dicotyledoneae	Caprifoliaceae	2	2		
Dicotyledoneae	Cardiopteridaceae	1	3		
Dicotyledoneae	Caricaceae	2	5		
Dicotyledoneae	Caryophyllaceae	25	122	22	18,0
Dicotyledoneae	Cecropiaceae	1	1		
Dicotyledoneae	Celastraceae	7	16	3	18,8

Group	Family	Genera	Species	Endemics	%Endemics
Dicotyledoneae	Celtidaceae	2	5		
Monocotyledoneae	Centrolepidaceae	1	1		
Dicotyledoneae	Ceratophyllaceae	1	2		
Dicotyledoneae	Cervantesiaceae	2	3		
Dicotyledoneae	Chenopodiaceae	16	93	29	31,2
Dicotyledoneae	Cistaceae	1	1		
Dicotyledoneae	Clethraceae	1	1		
Dicotyledoneae	Clusiaceae	2	2		
Dicotyledoneae	Cochlospermaceae	1	1		
Dicotyledoneae	Combretaceae	2	6		
Monocotyledoneae	Commelinaceae	8	25		
Dicotyledoneae	Convolvulaceae	12	128	20	15,6
Dicotyledoneae	Coriariaceae	1	1		
Monocotyledoneae	Corsiaceae	1	1		
Monocotyledoneae	Costaceae	1	1		
Dicotyledoneae	Crassulaceae	4	13	3	23,1
Dicotyledoneae	Cucurbitaceae	21	51	4	7,8
Dicotyledoneae	Cunoniaceae	3	4		
Gymnospermae	Cupressaceae	4	4		
Pteridophyta	Cyatheaceae	2	4		
Monocotyledoneae	Cyperaceae	24	314	17	5,4
Pteridophyta	Dennstaedtiaceae	3	7		
Dicotyledoneae	Desfontainiaceae	1	1		
Pteridophyta	Dicksoniaceae	2	2		
Pteridophyta	Didymochlaenaceae	1	1		
Dicotyledoneae	Dilleniaceae	1	1		
Monocotyledoneae	Dioscoreaceae	1	34	7	20,6
Dicotyledoneae	Dipsacaceae	3	4		
Dicotyledoneae	Donatiaceae	1	1		
Dicotyledoneae	Droseraceae	1	3		
Pteridophyta	Dryopteridaceae	10	34	1	2,9
Dicotyledoneae	Ebenaceae	1	1		
Dicotyledoneae	Elaeagnaceae	1	1		
Dicotyledoneae	Elaeocarpaceae	4	4		
Dicotyledoneae	Elatinaceae	1	2	1	50,0
Dicotyledoneae	Empetraceae	1	1		
Dicotyledoneae	Epacridaceae	1	1		
Gymnospermae	Ephedraceae	1	10	1	10,0
Pteridophyta	Equisetaceae	1	2		
Dicotyledoneae	Eremolepidaceae	1	1		
Dicotyledoneae	Ericaceae	5	16		
Monocotyledoneae	Eriocaulaceae	2	8	1	12,5
Dicotyledoneae	Erythroxylaceae	1	5		

Group	Family	Genera	Species	Endemics	%Endemics
Dicotyledoneae	Escalloniaceae	1	16	1	6,3
Dicotyledoneae	Eucryphiaceae	1	1		
Dicotyledoneae	Euphorbiaceae	29	218	30	13,8
Dicotyledoneae	Fabaceae	119	760	160	21,1
Dicotyledoneae	Frankeniaceae	1	7	3	42,9
Dicotyledoneae	Fumariaceae	1	6		
Dicotyledoneae	Gentianaceae	11	44	15	34,1
Dicotyledoneae	Geraniaceae	2	23	4	17,4
Dicotyledoneae	Gesneriaceae	5	11		
Pteridophyta	Gleicheniaceae	2	3		
Dicotyledoneae	Griseliniaceae	1	2		
Dicotyledoneae	Grossulariaceae	1	6		
Dicotyledoneae	Gunneraceae	1	6		
Dicotyledoneae	Halophytaceae	1	1	1	100,0
Dicotyledoneae	Haloragaceae	1	2		
Monocotyledoneae	Heliconiaceae	1	3		
Monocotyledoneae	Herreriaceae	2	4		
Dicotyledoneae	Hippuridaceae	1	1		
Monocotyledoneae	Hyacinthaceae	1	3		
Dicotyledoneae	Hydnoraceae	1	2		
Dicotyledoneae	Hydrangeaceae	1	1		
Monocotyledoneae	Hydrocharitaceae	5	6		
Dicotyledoneae	Hydroleaceae	1	2		
Pteridophyta	Hymenophyllaceae	5	29	1	3,4
Dicotyledoneae	Hypericaceae	1	14		
Monocotyledoneae	Hypoxidaceae	2	4	1	25,0
Monocotyledoneae	Iridaceae	23	121	33	27,3
Pteridophyta	Isoëtaceae	1	7	4	57,1
Dicotyledoneae	Juglandaceae	2	2		
Monocotyledoneae	Juncaceae	7	52	5	9,6
Monocotyledoneae	Juncaginaceae	2	5		
Dicotyledoneae	Krameriaceae	1	1		
Dicotyledoneae	Lacistemataceae	1	2		
Dicotyledoneae	Lamiaceae	31	112	3	2,7
Dicotyledoneae	Lardizabalaceae	1	1		
Dicotyledoneae	Lauraceae	5	14		
Monocotyledoneae	Laxmanniaceae	1	1	1	100,0
Dicotyledoneae	Ledocarpaceae	1	6	3	50,0
Monocotyledoneae	Lemnaceae	4	10		
Dicotyledoneae	Lentibulariaceae	2	16		
Monocotyledoneae	Limnocharitaceae	2	5		
Dicotyledoneae	Linaceae	2	10		

Group	Family	Genera	Species	Endemics	%Endemics
Dicotyledoneae	Linderniaceae	1	1		
Pteridophyta	Lindsaeaceae	1	2		
Dicotyledoneae	Loasaceae	4	37	6	16,2
Dicotyledoneae	Loganiaceae	2	10		
Dicotyledoneae	Loranthaceae	5	8		
Monocotyledoneae	Luzuriagaceae	1	2		
Pteridophyta	Lycopodiaceae	9	22	1	4,5
Pteridophyta	Lygodiaceae	1	1	2	200,0
Dicotyledoneae	Lythraceae	8	35		
Dicotyledoneae	Malesherbiaceae	1	3		
Dicotyledoneae	Malpighiaceae	23	46	3	6,5
Dicotyledoneae	Malvaceae	34	233	53	22,7
Monocotyledoneae	Marantaceae	4	6		
Pteridophyta	Marattiaceae	1	1		
Pteridophyta	Marsileaceae	3	5		
Dicotyledoneae	Martyniaceae	2	4	2	50,0
Monocotyledoneae	Mayacaceae	1	2		
Dicotyledoneae	Melastomataceae	9	32	1	3,1
Dicotyledoneae	Meliaceae	5	14	1	7,1
Dicotyledoneae	Menispermaceae	3	6		
Dicotyledoneae	Menyanthaceae	1	1		
Dicotyledoneae	Microteaceae	1	1		
Dicotyledoneae	Misodendraceae	1	7		
Dicotyledoneae	Molluginaceae	2	3		
Dicotyledoneae	Monimiaceae	2	2		
Dicotyledoneae	Montiaceae	8	36	1	2,8
Dicotyledoneae	Moraceae	6	14		
Dicotyledoneae	Muntingiaceae	1	1		
Dicotyledoneae	Myoporaceae	1	1		
Dicotyledoneae	Myricaceae	1	1		
Dicotyledoneae	Myrsinaceae	1	6		
Dicotyledoneae	Myrtaceae	23	65	2	3,1
Monocotyledoneae	Najadaceae	1	2		
Dicotyledoneae	Nanodeaceae	1	1		
Pteridophyta	Nephrolepidaceae	1	1		
Dicotyledoneae	Nothofagaceae	2	6		
Dicotyledoneae	Nyctaginaceae	8	19	2	10,5
Dicotyledoneae	Nymphaeaceae	2	6		
Dicotyledoneae	Ochnaceae	1	2		
Dicotyledoneae	Oleaceae	5	13	1	7,7
Dicotyledoneae	Onagraceae	7	70	9	12,9
Pteridophyta	Ophioglossaceae	2	9		
Dicotyledoneae	Opiliaceae	1	1		

Group	Family	Genera	Species	Endemics	%Endemics
Monocotyledoneae	Orchidaceae	93	281	18	6,4
Dicotyledoneae	Orobanchaceae	9	28	1	3,6
Pteridophyta	Osmundaceae	2	2		
Dicotyledoneae	Oxalidaceae	2	73	10	13,7
Dicotyledoneae	Papaveraceae	6	12		
Pteridophyta	Parkeriaceae	1	1		
Dicotyledoneae	Parnassiaceae	1	1		
Dicotyledoneae	Passifloraceae	1	20		
Dicotyledoneae	Pentaphylacaceae	1	1		
Monocotyledoneae	Philesiaceae	1	1		
Dicotyledoneae	Phrymaceae	2	6		
Dicotyledoneae	Phyllanthaceae	2	10		
Dicotyledoneae	Phytolaccaceae	6	13	1	7,7
Dicotyledoneae	Picrodendraceae	1	1		
Gymnospermae	Pinaceae	2	4		
Dicotyledoneae	Piperaceae	2	42	5	11,9
Dicotyledoneae	Plantaginaceae	26	116	13	11,2
Dicotyledoneae	Plumbaginaceae	3	4		
Monocotyledoneae	Poaceae	187	1170	165	14,1
Gymnospermae	Podocarpaceae	4	6		
Dicotyledoneae	Podostemaceae	6	9	1	11,1
Dicotyledoneae	Polemoniaceae	7	11	2	18,2
Dicotyledoneae	Polygalaceae	6	61	21	34,4
Dicotyledoneae	Polygonaceae	12	58	2	3,4
Pteridophyta	Polypodiaceae	12	44	1	2,3
Monocotyledoneae	Pontederiaceae	3	10		
Dicotyledoneae	Portulacaceae	1	24	8	33,3
Monocotyledoneae	Potamogetonaceae	2	12		
Dicotyledoneae	Primulaceae	6	11		
Dicotyledoneae	Proteaceae	6	8		
Pteridophyta	Psilotaceae	1	1		
Pteridophyta	Pteridaceae	17	75	3	4,0
Dicotyledoneae	Quillajaceae	1	1		
Dicotyledoneae	Rafflesiaceae	1	2		
Dicotyledoneae	Ranunculaceae	12	55	3	5,5
Dicotyledoneae	Resedaceae	1	1		
Dicotyledoneae	Rhamnaceae	14	26	4	15,4
Dicotyledoneae	Rosaceae	22	95	10	10,5
Dicotyledoneae	Rubiaceae	41	133	9	6,8
Monocotyledoneae	Ruppiaceae	1	3		
Monocotyledoneae	Ruscaceae	1	1		
Dicotyledoneae	Rutaceae	8	17		
Pteridophyta	Saccolomataceae	1	1		

Group	Family	Genera	Species	Endemics	%Endemics
Dicotyledoneae	Salicaceae	8	30	1	3,3
Pteridophyta	Salviniaceae	1	4		
Dicotyledoneae	Samolaceae	1	3		
Dicotyledoneae	Santalaceae	1	1		
Dicotyledoneae	Sapindaceae	17	46	2	4,3
Dicotyledoneae	Sapotaceae	3	7		
Dicotyledoneae	Saxifragaceae	5	6		
Pteridophyta	Schizaeaceae	1	1		
Dicotyledoneae	Schoepfiaceae	3	6	1	16,7
Dicotyledoneae	Scrophulariaceae	3	17	1	5,9
Pteridophyta	Selaginellaceae	1	8		
Dicotyledoneae	Simaroubaceae	6	8		
Monocotyledoneae	Smilacaceae	1	5		
Dicotyledoneae	Solanaceae	35	322	87	27,0
Dicotyledoneae	Sphenocleaceae	1	1		
Dicotyledoneae	Sterculiaceae	6	45	3	6,7
Dicotyledoneae	Stylidiaceae	1	1		
Dicotyledoneae	Styracaceae	1	2		
Dicotyledoneae	Symplocaceae	1	2		
Dicotyledoneae	Talinaceae	1	3		
Dicotyledoneae	Tamaricaceae	1	1		
Pteridophyta	Tectariaceae	1	1		
Dicotyledoneae	Tetrachondraceae	1	1		
Dicotyledoneae	Theaceae	1	1		
Pteridophyta	Thelypteridaceae	2	36	2	5,6
Dicotyledoneae	Thymelaeaceae	3	3		
Dicotyledoneae	Tiliaceae	4	12		
Dicotyledoneae	Tribelaceae	1	1		
Dicotyledoneae	Trigoniaceae	1	1		
Monocotyledoneae	Triuridaceae	1	1		
Dicotyledoneae	Tropaeolaceae	1	16	7	43,8
Dicotyledoneae	Turneraceae	2	14		
Monocotyledoneae	Typhaceae	1	4		
Dicotyledoneae	Ulmaceae	1	1		
Dicotyledoneae	Urticaceae	7	25	2	8,0
Dicotyledoneae	Valerianaceae	4	52	16	30,8
Monocotyledoneae	Velloziaceae	1	2	1	50,0
Dicotyledoneae	Verbenaceae	23	169	42	24,9
Dicotyledoneae	Violaceae	4	70	29	41,4
Dicotyledoneae	Viscaceae	1	16		
Dicotyledoneae	Vitaceae	3	10		
Pteridophyta	Vittariaceae	2	3		
Dicotyledoneae	Vivianiaceae	2	3		

Group	Family	Genera	Species	Endemics	%Endemics
Dicotyledoneae	Vochysiaceae	1	1		
Dicotyledoneae	Winteraceae	1	1		
Pteridophyta	Woodsiaceae	2	3		
Dicotyledoneae	Ximeniaceae	1	1		
Monocotyledoneae	Xyridaceae	1	7		
Monocotyledoneae	Zannichelliaceae	1	1		
Monocotyledoneae	Zingiberaceae	1	1		
Dicotyledoneae	Zygophyllaceae	6	15	5	33,3
Total		2090	10006	1749	

Halophytaceae and the endemic genera are 44 (2.10% of the total of Argentinian genera), with the Asteraceae leading in number of endemic genera (12), followed by Brassicaceae (8), Cactaceae (4), Fabaceae and Verbenaceae (3) (Tab. 5); the total endemic species for Argentina is 1,749 (17,48% of the total number of species for this country).

Endemism in the Biogeographic Regions

Of the eight families endemic from the *Southern Cone*, the monotypic Lactoridaceae is exclusive from the Robison Crusoe Island (Más a Tierra), in the Juan Fernández Archipelago (Chile), included in the Temperate-humid region of the Pacific, with a flora related to the Subantarctic phytogeographic province, however counting with subtropical and other specific elements from the Pacific Islands. The Francoaceae, with two monotypic genera and the monotypic Gomortegaceae are exclusive from the mediterranean region of Central Chile. All four endemic families shared between Argentina and Chile are from the Subantartic forests, the Aextoxicaceae and Tribelaceae are monotypic and the Philesiaceae comprises two monotypic genera, while the Misodendraceae has a single genus and eight hemiparasitic species. The Halophytaceae, the only endemic family from Argentina, is exclusive from the Monte region, in arid pre-montane areas.

In the South-Central dry Andes, which include the Puna, Prepuna and high-andean regions in northern Argentina and Chile, there are several endemic genera of Asteraceae such as *Cabreraea* Bonifacino*, Dolichlasium* Lag. and *Famatinanthus* Ariza & S.E. Freire, of Brassicaceae, as *Lithodraba* Boelcke*, Parodiodoxa* O.E. Schulz*, Sarcodraba* Gilg & Muschl. and *Zuloagocardamum* Salariato & Al-Shehbaz and of Montiaceae, as *Schreiteria* Carolin, amongst others. Genera that are characteristic but not endemic to the *Southern Cone* are *Clinanthus* Herb. and *Hieronymiella* Pax (Amaryllidaceae), *Chiliotrichiopsis* Cabrera*, Cuatrecasasiella* H. Rob.*, Urmenetea* Phil. and *Werneria* Kunth (Asteraceae), *Aschersoniodoxa* Gilg & Muschl.*, Mancoa* Wedd. and *Polypsecadium* O. E. Schulz (Brassicaceae), *Pycnophyllum* J. Rémy (Caryophyllaceae), *Cardenanthus* R.C. Forster and *Mastigostyla* I.M. Johnst. (Iridaceae), *Nototriche* Turcz. and *Tarasa* Phil. (Malvaceae), *Hypseocharis* J. Rémy (Oxalidaceae), *Aa* Juss. and *Myrosmodes* Rchb. f. (Orchidaceae), *Lenzia* Phil. (Montiaceae) and *Anthochloa* Nees & Meyen and *Aciachne* Benth. (Poaceae), among others. Some genera are common between the high Andes and the Patagonic region, such as *Adesmia* (Fabaceae)*, Azorella* Lam. and *Mulinum* Pers. (Apiaceae), *Chuquiraga* Juss. and *Nardophyllum* Hook. & Arn. (Asteraceae)*, Fabiana* Ruiz & Pav. (Solanaceae) and *Junellia* Moldenke (Verbenaceae). Among the genera that are endemic to the central Andes of Mendoza and San Juan (Argentina) are *Haroldia* Bonifacino*, Huarpea* Cabrera and *Katinasia* Bonifacino (Asteraceae).

The North-Central Humid Andes or Yungas show few endemic genera, one of the examples being *Austropeucedanum* Mathias & Constance (Apiaceae), and this may be explained by the continuation of the Yungas into bordering areas of Bolivia. The characteristic or exclusive elements within this region include holartic families such as BetulaWceae (*Alnus* Mill.) and Juglandaceae (*Juglans* L.) and other families that reach northern Argentina, such as Myricaceae (*Myrica* L.), Pentaphylacaceae (*Ternstroemia* Mutis ex L. f.) and Velloziaceae (*Barbaceniopsis* L.B. Sm.).

Table 5 – *Southern Cone*, endemic genera.

Family	Genus	NºSpp.	Countries			
Aextoxicaceae	*Aextoxicon*	1	Argentina		Chile	
Alstroemeriaceae	*Leontochir*	1			Chile	
Amaranthaceae	*Quaternella*	1		S Brasil		
Amaryllidaceae	*Ancrumia*	1			Chile	
	Beauverdia	4	Argentina	S Brasil		Uruguay
	Eithea	1		S Brasil		
	Famatina	2	Argentina		Chile	
	Gethyum	2			Chile	
	Gilliesia	5	Argentina		Chile	
	Ipheion	4	Argentina		Chile	Uruguay
	Leucocoryne	45			Chile	
	Miersia	4			Chile	
	Phycella	6	Argentina		Chile	
	Placea	5			Chile	
	Solaria	3	Argentina		Chile	
	Speea	1			Chile	
	Traubia	1			Chile	
	Tristagma	20	Argentina		Chile	
	Zoellnerallium	2	Argentina		Chile	
Apiaceae	*Asteriscium*	9	Argentina		Chile	
	Austropeucedanum	1	Argentina			
	Bolax	2	Argentina		Chile	
	Diposis	3	Argentina		Chile	Uruguay
	Gymnophyton	6	Argentina		Chile	
	Homalocarpus	6			Chile	
	Huanaca	4	Argentina		Chile	
	Laretia	1	Argentina		Chile	
	Notiosciadium	1	Argentina			Uruguay
	Oligocladus	1	Argentina			
	Pozoa	2	Argentina		Chile	
Apocynaceae	*Diplolepis*	14	Argentina		Chile	
	Elytropus	1			Chile	
	Rhyssostelma	1				Uruguay
Araceae	*Mangonia*	2		S Brasil		Uruguay
Arecaceae	*Juania*	1			Chile	
	Jubaea	1			Chile	
Asteraceae	*Acrisione*	1	Argentina		Chile	
	Ameghinoa	1	Argentina			
	Asteropsis	1		S Brasil		Uruguay
	Aylacophora	1	Argentina			
	Brachyclados	3	Argentina		Chile	

Family	Genus	NºSpp.	Countries			
	Burkartia	1	Argentina			
	Cabreraea	1	Argentina			
	Calopappus	1			Chile	
	Centaurodendron	2			Chile	
	Chiliophyllum	3	Argentina		Chile	
	Chiliotrichum	2	Argentina		Chile	
	Criscia	1	Argentina	S Brasil		Uruguay
	Dendroseris	11			Chile	
	Dolichlasium	1	Argentina			
	Doniophyton	2	Argentina		Chile	
	Duseniella	1	Argentina			
	Eriachaenium	1	Argentina			
	Famtinanthus	1	Argentina			
	Gamochaetopsis	1	Argentina		Chile	
	Guynesomia	1			Chile	
	Gypothamnium	1			Chile	
	Haroldia	1	Argentina			
	Heterothalamulopsis	1		S Brasil		
	Huarpea	1	Argentina			
	Ianthopappus	1	Argentina	S Brasil		Uruguay
	Katinasia	1	Argentina			
	Kieslingia	1			Chile	
	Lepidophyllum	1	Argentina		Chile	
	Leptinella	1	Argentina		Chile	
	Leptocarpha	1			Chile	
	Leunisia	1			Chile	
	Lycapsus	1			Chile	
	Macrachaenium	1	Argentina			
	Marticorenia	1			Chile	
	Microgyne	1	Argentina	S Brasil		Uruguay
	Micropsis	5	Argentina		Chile	Uruguay
	Moscharia	2			Chile	
	Oxyphyllum	1			Chile	
	Panphalea	9	Argentina	S Brasil		Uruguay
	Pleocarphus	1			Chile	
	Podanthus	2			Chile	
	Sommerfeltia	2	Argentina	S Brasil		Uruguay
	Thamnoseris	1			Chile	
	Triptilion	7	Argentina		Chile	
	Urmenetea	1	Argentina		Chile	
	Yunquea	1			Chile	
Bignoniaceae	*Campsidium*	1	Argentina		Chile	
Boraginaceae	*Ixorhea*	1	Argentina			

Family	Genus	NºSpp.		Countries
	Nesocaryum	1		Chile
	Selkirkia	1		Chile
Brassicaceae	*Chilocardamum*	4	Argentina	
	Delpinophytum	1	Argentina	
	Hollermayera	1		Chile
	Ivania	1		Chile
	Lithodraba	1	Argentina	
	Onuris	5	Argentina	Chile
	Parodiodoxa	1	Argentina	
	Phlebolobium	1	Argentina	
	Sarcodraba	4	Argentina	
	Schizopetalon	10	Argentina	Chile
	Trichotolinum	1	Argentina	
	Xerodraba	7	Argentina	Chile
	Zuloagocardamum	1	Argentina	
Bromeliaceae	*Fascicularia*	1		Chile
	Ochagavia	4		Chile
Cactaceae	*Acanthocalycium*	5	Argentina	
	Austrocactus	4	Argentina	Chile
	Denmoza	1	Argentina	
	Eriosyce	5		Chile
	Maihuenia	2	Argentina	Chile
	Pterocactus	9	Argentina	Chile
	Pyrrhocactus	27	Argentina	Chile
	Setiechinopsis	1	Argentina	
	Tephrocactus	7	Argentina	
	Thelocephala	6	Argentina	Chile
Calyceraceae	*Boopis*	13	Argentina	Chile
	Gamocarpha	6	Argentina	Chile
	Nastanthus	9	Argentina	Chile
Campanulaceae	*Cyphocarpus*	3		Chile
Caryophyllaceae	*Philippiella*	1	Argentina	Chile
	Reicheella	1		Chile
Corsiaceae	*Arachnitis*	1	Argentina	Chile
Cucurbitaceae	*Halosicyos*	1	Argentina	
Cupressaceae	*Austrocedrus*	1	Argentina	Chile
	Fitzroya	1	Argentina	Chile
	Pilgerodendron	1	Argentina	Chile
Dicksoniaceae	*Thyrsopteris*	1		Chile
Epacridaceae	*Lebetanthus*	1	Argentina	Chile
Escalloniaceae	*Valdivia*	1		Chile
Euphorbiaceae	*Adenopeltis*	1		Chile
	Avellanita	1		Chile

Family	Genus	NºSpp.	Countries				
	Colliguaja	5	Argentina	S Brasil	Chile		
Fabaceae	*Anarthrophyllum*	15	Argentina		Chile		
	Balsamocarpon	1	Argentina		Chile		
	Lophocarpinia	1	Argentina			Paraguay	
	Ramorinoa	1	Argentina				
	Stenodrepanum	1	Argentina				
	Zuccagnia	1	Argentina				
Francoaceae	*Francoa*	1			Chile		
	Tetilla	1			Chile		
Gesneriaceae	*Asteranthera*	1	Argentina		Chile		
	Mitraria	1	Argentina		Chile		
	Sarmienta	1			Chile		
Gomortegaceae	*Gomortega*	1			Chile		
Halophytaceae	*Halophytum*	1	Argentina				
Hymenophyllaceae	*Hymenoglossum*	1	Argentina		Chile		
	Serpyllopsis	1	Argentina		Chile		
Iridaceae	*Solenomelus*	2	Argentina		Chile		
	Tapeinia	1	Argentina				
Juncaginaceae	*Tetroncium*	1	Argentina		Chile		
Lactoridaceae	*Lactoris*	1			Chile		
Lamiaceae	*Cuminia*	1			Chile		
	Kurzamra	1	Argentina		Chile		
Lardizabalaceae	*Boquila*	1	Argentina		Chile		
	Lardizabala	1	Argentina		Chile		
Laxmanniaceae	*Trichopetalum*	2	Argentina		Chile		
Loasaceae	*Huidobria*	2			Chile		
	Scyphanthus	1			Chile		
Loranthaceae	*Desmaria*	1			Chile		
	Notanthera	1			Chile		
Malpighiaceae	*Cordobia*	1	Argentina			Paraguay	
	Dinemagonum	1			Chile		
	Dinemandra	1			Chile		
	Gallardoa	1	Argentina				
	Peregrina	1	Argentina	S Brasil		Paraguay	
	Tricomaria	1	Argentina				
Malvaceae	*Bordasia*	1				Paraguay	
	Calyculogygas	1		S Brasil			Uruguay
	Calyptraemalva	1		S Brasil			
	Corynabutilon	7	Argentina		Chile		
	Lecanophora	7	Argentina		Chile		
	Neobaclea	1	Argentina				
	Tropidococcus	1		S Brasil			
Marsileaceae	*Regnellidium*	1	Argentina	S Brasil			Uruguay

Family	Genus	NºSpp.	Countries				
Misodendraceae	*Misodendrum*	8	Argentina		Chile		
Monimiaceae	*Laureliopsis*	1	Argentina		Chile		
	Peumus	1			Chile		
Myrtaceae	*Amomyrtus*	2	Argentina		Chile		
	Legrandia	1			Chile		
	Tepualia	1	Argentina		Chile		
Nanodeaceae	*Nanodea*	1	Argentina		Chile		
Nothofagaceae	*Nothofagus*	4	Argentina		Chile		
Orchidaceae	*Bipinnula*	10	Argentina	S Brasil	Chile		Uruguay
	Codonorchis	2	Argentina	S Brasil	Chile		
	Gavilea	14	Argentina		Chile		
Philesiaceae	*Lapageria*	1			Chile		
	Philesia	1	Argentina		Chile		
Phytolaccaceae	*Anisomeria*	2			Chile		
	Ercilla	2			Chile		
Plantaginaceae	*Fonkia*	1	Argentina		Chile		
	Melosperma	1	Argentina		Chile		
	Monttea	3	Argentina		Chile		
Poaceae	*Eremium*	1	Argentina		Chile		
	Leptophyllochloa	1	Argentina		Chile		
	Megalachne	1			Chile		
	Neobouteloua	2	Argentina				
	Nicoraepoa	7	Argentina		chile		
	Oplismenopsis	1	Argentina				Uruguay
	Osvaldoa	1	Argentina				
	Podophorus	1			Chile		
	Relchela	1	Argentina		Chile		
Podocarpaceae	*Lepidothamnus*	1	Argentina		Chile		
	Saxegothaea	1	Argentina		Chile		
Podostemaceae	*Heterotristicha*	1					Uruguay
Polypodiaceae	*Synammia*	3			Chile		
Portulacaceae	*Amphipetalum*	1				Paraguay	
	Lenzia	1	Argentina		Chile		
	Schreiteria	1	Argentina				
Proteaceae	*Gevuina*	1	Argentina		Chile		
Ranunculaceae	*Barneoudia*	3	Argentina		Chile		
	Callianthemoides	1	Argentina		Chile		
	Hamadryas	5	Argentina		Chile		
Rhamnaceae	*Ochetophila*	2	Argentina		Chile		
	Retanilla	4	Argentina		Chile		
	Trevoa	1			Chile		
Rosaceae	*Margyracaena*	1			Chile		
Rubiaceae	*Oreopolus*	1	Argentina		Chile		

Family	Genus	NºSpp.	Countries				
Rutaceae	*Pitavia*	1			Chile		
Rutaceae	*Raulinoa*	1		S Brasil			
Santalaceae	*Myoschilos*	1	Argentina		Chile		
Sapindaceae	*Bridgesia*	1			Chile		
	Guindilia	3	Argentina		Chile		
Saxifragaceae	*Saxifragella*	1	Argentina		Chile		
	Saxifragodes	1	Argentina		Chile		
Solanaceae	*Benthamiella*	12	Argentina		Chile		
	Combera	2	Argentina		Chile		
	Latua	1			Chile		
	Pantacantha	1	Argentina				
	Reyesia	4	Argentina		Chile		
	Salpiglossis	2	Argentina		Chile		
	Schizanthus	14	Argentina		Chile		
	Sclerophylax	14	Argentina			Paraguay	Uruguay
	Vestia	1			Chile		
Tecophilaeaceae	*Conanthera*	5			Chile		
	Tecophilaea	2			Chile		
Tribelaceae	*Tribeles*	1	Argentina		Chile		
Verbenaceae	*Dipyrena*	1	Argentina				
	Neosparton	4	Argentina				
	Parodianthus	2	Argentina				
Vivianiaceae	*Araeoandra*	1			Chile		
	Cissarobryon	1			Chile		
	Viviania	4	Argentina	S Brasil	Chile		
Zygophyllaceae	*Metharme*	1			Chile		
	Pintoa	1			Chile		
	Plectrocarpa	2	Argentina				

The Atlantic forest region, in the eastern extreme of Argentina and adjacent areas of Paraguay and southern Brazil, has high richness of families, genera and species, but there are few endemisms, with no records of endemic families, and just 9 genera that grow exclusively in the Paraná related forests of the Southern Cone: *Quaternella* Pederesen (Amaranthaceae), *Eithea* Ravenna (Amaryllidaceae), *Criscia* Katinas and *Heterothalamulopsis* Deble, A.S. Oliveira & Marchiori (Asteraceae), *Peregrina* W.R. Anderson (Malpighiaceae), *Calyptraemalva* Krapov. and *Tropidococcus* Krapov. (Malvaceae), *Amphipetalum* Bacigalupo (Portulacaceae) and *Raulinoa* R.S. Cowan (Rutaceae).

In Chile, the region of the Chilean-Peruvian Desert includes aproximately 15 endemic genera, chiefly for the Cactaceae (*Eriosyce* Phil. and *Thelocephala* Y. Ito), Asteraceae (*Gypothamnium* Phil., *Kieslingia* Faúndez, Saldivia & A.E. Martic. and *Oxyphyllum* Phil.), Alstroemeriaceae (*Leontochir* Phil.), Loasaceae (*Huidobria* Gay) and Zygophyllaceae (*Metharme* Phil. ex Engl. and *Pintoa* Gay), among others. A high number of endemic species also occurs in this region, including numerous species of *Cryptantha* G. Don and *Heliotropium* L. (Boraginaceae), *Copiapoa* Britton & Rose (Cactaceae) and *Nolana* L.f. (Solanaceae).

The Chilean mediterranean region comprises an important number of endemic taxa, with

over 50 genera that are exclusive to this region or spreading to contiguous areas, for example *Jubaea* Kunth (Arecaceae), many genera of Amaryllidaceae (*Gethyum* Phil., *Leucocoryne* Lindl. and *Speea* Loes.), Asteraceae (*Calopappus* Meyen, *Guynesomia* Bonifacino & Sancho, *Leunisia* Phil., *Marticorenia* Crisci, *Moscharia* Ruiz & Pav., *Pleocarphus* D. Don and *Podanthus* Lag.), Bromeliaceae (*Fascicularia* Mez and *Ochagavia* Phil.), Monimiaceae (*Peumus* Molina), Tecophilaeaceae (*Conanthera* Ruiz & Pav. and *Tecophilaea* Bertero ex Colla), Vivianiaceae (*Araeoandra* Lefor and *Cissarobryon* Kunze ex Poepp.), Francoaceae (*Francoa* Cav. and *Tetilla* DC.), Gomortegaceae (*Gomortega* Ruiz & Pav.) and Zygophyllaceae (*Pintoa*). The number of endemic species is also outstanding.

For the Pampas region, there are 15 endemic genera, including representatives of Asteraceae (*Asteropsis* Less., *Ianthopappus* Roque & D.J.N. Hind, *Microgyne* Less., *Panphalea* Lag. and *Sommerfeltia* Less.), Araceae (*Mangonia* Schott), Poaceae (*Oplismenopsis* Parodi and *Osvaldoa*), Amaryllidaceae (*Beauverdia* Herter and *Ipheion* Raf.), Apiaceae (*Notiosciadium* Speg.) and Apocynaceae (*Rhyssostelma* Decne.). The genus *Sclerophylax* Miers (Solanaceae) comprises 14 species chiefly from the Pampas with some extension into the Monte region.

The Monte includes many endemic genera, more than 20 exclusive from Argentina, such as *Acanthocalycium* Backeb., *Denmoza* Britton & Rose, *Setiechinopsis* (Backeb.) de Haas and *Tephrocactus* Lem. (all Cactaceae), *Ramorinoa* Speg., *Stenodrepanum* Harms and *Zuccagnia* Cav. (Fabaceae), *Dipyrena* Hook. and *Parodianthus* Tronc. (Verbenaceae), *Ixorhea* Fenzl (Boraginaceae), *Halosicyos* Mart.Crov. (Cucurbitaceae), *Plectrocarpa* Gillies ex Hook. & Arn. (Zygophyllaceae) and *Tricomaria* Hook. & Arn. (Malpighiaceae). Genera found in the Monte sometimes extend into mediterranean Chile, such as *Kurzamra* Kuntze (Lamiaceae), *Guindilia* Hook. & Arn. (Sapindaceae), *Monttea* Gay (Plantaginaceae) and *Barneoudia* Gay (Ranunculaceae).

Even taking into account that as one approaches higher latitudes the number of taxa diminishes, the number of endemic genera in the Patagonian region increases, with many representatives of Asteraceae (*Ameghinoa* Speg., *Aylacophora* Cabrera, *Burkartia* Crisci, *Duseniella* K. Schum., *Lepidophyllum* Cass. and *Doniophyton* Wedd.), Brassicaceae (*Chilocardamum* O.E. Schulz, *Delpinophytum* Speg., *Onuris* Phil., *Phlebolobium* O.E. Schulz and *Xerodraba* Skottsb.), Cactaceae (*Austrocactus* Britton & Rose, *Maihuenia* (F.C.A. Weber) K. Schum. and *Pterocactus* K. Schum.), Calyceraceae (*Boopis* Juss., *Gamocarpha* DC. and *Nastanthus* Miers), Fabaceae (*Anarthrophyllum* Benth.), Verbenaceae (*Neosparton* Griseb.), Solanaceae (*Benthamiella* Speg. and *Pantacantha* Speg.) and Malpighiaceae (*Gallardoa* Hicken). Genera present in this region and also in central Chile include *Triptilion* Ruiz & Pav. (Asteraceae), *Trichopetalum* Lindl. (Laxmanniaceae), *Melosperma* Benth. (Plantaginaceae) and *Retanilla* (DC.) Brongn. (Rhamnaceae), *Austrocactus* and *Maihuenia* (Cactaceae). Amongst Patagonian genera also found in the Monte we have *Lecanophora* Speg. (Malvaceae) and *Neosparton* (Verbenaceae).

Only three genera are endemic from the Chaco: *Lophocarpinia* Burkart (Fabaceae), *Bordasia* Krapov. (Malvaceae) and *Cordobia* Nied. (Malpighiaceae), as this biome crosses over to Bolivia and the Central-Western area of Brazil (not included under this project).

Subantartic forests, within the temperate-humid Pacific region, include expressive numbers of endemic families and genera; however, the number of endemic species is not very high. The four endemic families from the region were indicated above; other families that have representatives in other places have here their unique presence in South America, as the Cupressaceae (with three endemic genera: *Austrocedrus* Florin & Boutelje, *Fitzroya* Hook. f. ex Lindl. and *Pilgerodendron* Florin) and Restionaceae (*Apodasmia* B.G. Briggs & L.A.S. Johnson). There are around 60 endemic genera in this region, among them the Juan Fernández Islands host 13, including an Arecaceae (*Juania* Drude), genera of Asteraceae (*Centaurodendron* Johow, *Dendroseris* D. Don, *Yunquea* Skottsb.), Boraginaceae (*Selkirkia* Hemsl.), Dicksoniaceae (*Thyrsopteris* Kunze), Lactoridaceae (*Lactoris* Phil.), Lamiaceae (*Cuminia* Colla), Myrtaceae (*Nothomyrcia* Kausel) and Poaceae (*Megalachne* Steud. and *Podophorus* Phil.). The continental zone has endemic genera that are exclusive from Chile or shared between Chile and Argentina of Asteraceae (*Gamochaetopsis* Anderb. & S.E. Freire, *Leptinella* Cass., *Leptocarpha* DC. and *Macrachaenium* Hook.f.), Epacridaceae (*Lebetanthus* Endl.), Escalloniaceae (*Valdivia*

Gay ex J. Rémy), Euphorbiaceae *(Avellanita* Phil.), Gesneriaceae (*Asteranthera* Hanst. and *Sarmienta* Ruiz & Pav.), Iridaceae (*Solenomelus* Miers and *Tapeinia* Comm. ex Juss.), Lardizabalaceae (*Boquila* Decne. and *Lardizabala* Ruiz & Pav.), Monimiaceae (*Laureliopsis* Schodde), Podocarpaceae (*Lepidothamnus* Phil. and *Saxegothaea* Lindl.), among others. Families Araucariaceae (*Araucaria* Juss.), Podocarpaceae (*Podocarpus* L'Her. ex Pers.), Thymelaeaceae (*Ovidia* Meisn. and *Drapetes* Lam.), Hymenophyllaceae (*Hymenophyllum* Sm.), Blechnaceae (*Blechnum* L.) and Winteraceae (*Drimys* J.R. Forst. & G. Forst.) are disjunct between this region and the Atlantic Forest.

The analysis of the distribution of endemisms through the different biogeographic regions allows us to conclude that the number of endemic or exclusive families and genera is high in the Subantarctic forests, but there is a smaller number of endemic species in relation to other areas. Mediterranean Chile and deserts of Patagonia and Monte have a high number of endemic families, genera and species when compared with the totality of the analised flora, and such indices decrease as the latitude increases towards Patagonia, together with the general decrease in species richness of the vascular flora. The Chilean-Peruvian desert and adjacent high Andean and Puna areas in norhtern Argentina do not possess endemic families and the number of endemic genera is smaller, while the number of endemic species is outstanding. The amount of endemism diminishes markedly from west to east, with low numbers in the Chaco and Pampa, growing again, in terms of number of endemic species, in the Atlantic Forest from of eastern Paraguay, northeastern Argentina and southern Brazil.

Introduced taxa

A total of 19 introduced families are present in the *Southern Cone*, representing 6% of the total number of families in this region, namely: Aceraceae, Achariaceae, Agapanthaceae, Agavaceae, Aponogetonaceae, Asparagaceae, Asphodelaceae, Balsaminaceae, Cannabaceae, Caprifoliaceae, Dipsacaceae, Elaeagnaceae, Fumariaceae, Myoporaceae, Pinaceae, Resedaceae, Ruscaceae, Tamaricaceae and Zingiberaceae. The area counts with a total of 344 genera represented by introduced species (12.84%) and a total of 1,129 introduced species (6.2% of the total of species found in the region). The family with the highest number of introduced genera is Asteraceae, with 54 genera, followed by Poaceae (42 genera), Brassicaceae (33), Fabaceae (22), Apiaceae (20), Lamiaceae (14) and Rosaceae (10) (Tab. 6).

The country where the highest record of introduced taxa was found is Argentina with 892, or 8.91% of the total number of species recorded for this country.

Table 6 – *Southern Cone*, introduced genera.

Family	Genus	Nº Spp.	Countries				
Acanthaceae	*Hypoestes*	1				Paraguay	
Aceraceae	*Acer*	2	Argentina				
Achariaceae	*Hydnocarpus*	1				Paraguay	
Agapanthaceae	*Agapanthus*	1	Argentina				
Agavaceae	*Agave*	1	Argentina				
	Yucca	2	Argentina				
Aizoaceae	*Aptenia*	1	Argentina				
	Cypselea	1	Argentina				
	Galenia	1			Chile		
	Sesuvium	1	Argentina	S Brasil	Chile	Paraguay	Uruguay
Alismataceae	*Alisma*	2	Argentina		Chile		
Amaryllidaceae	*Allium*	6	Argentina				
	Amaryllis	1		S Brasil	Chile	Paraguay	
	Brunsvigia	1	Argentina				

Family	Genus	Nº Spp.	Countries			
	Pyrolirion	1			Chile	
Anacardiaceae	*Mangifera*	1		S Brasil		Paraguay
Apiaceae	*Ammi*	2	Argentina	S Brasil	Chile	Uruguay
	Anethum	1	Argentina	S Brasil	Chile	
	Anthriscus	2	Argentina		Chile	
	Bupleurum	1	Argentina			
	Caucalis	1	Argentina			
	Conium	1	Argentina	S Brasil	Chile	
	Coriandrum	1	Argentina	S Brasil	Chile	Paraguay
	Foeniculum	1	Argentina	S Brasil	Chile	Paraguay Uruguay
	Heracleum	1	Argentina			
	Levisticum	1			Chile	
	Oenanthe	2	Argentina			Uruguay
	Pastinaca	1	Argentina		Chile	Uruguay
	Petroselinum	1	Argentina	S Brasil	Chile	
	Pimpinella	1	Argentina	S Brasil		
	Scandix	1	Argentina		Chile	
	Seseli	1			Chile	
	Sium	1			Chile	
	Tordylium	1	Argentina			
	Torilis	2	Argentina	S Brasil	Chile	Uruguay
Apocynaceae	*Calotropis*	1		S Brasil		Paraguay
	Catharanthus	1	Argentina	S Brasil		Paraguay Uruguay
	Gomphocarpus	1		S Brasil		
	Plumeria	1	Argentina	S Brasil		
	Vinca	1	Argentina	S Brasil	Chile	Uruguay
Aponogetonaceae	*Aponogeton*	1			Chile	
Araceae	*Alocasia*	1				Paraguay
	Arum	1	Argentina			Uruguay
	Colocasia	1	Argentina			Paraguay Uruguay
	Zantedeschia	1	Argentina	S Brasil	Chile	Uruguay
Araliaceae	*Hedera*	1	Argentina			
Arecaceae	*Phoenix*	1	Argentina			
	Trachycarpus	1	Argentina			
Asparagaceae	*Asparagus*	4	Argentina			Uruguay
Asphodelaceae	*Asphodelus*	1	Argentina		Chile	
Asteraceae	*Achillea*	2	Argentina	S Brasil	Chile	Uruguay
	Anthemis	2	Argentina	S Brasil	Chile	Paraguay Uruguay
	Arctium	1	Argentina	S Brasil	Chile	Uruguay
	Arctotheca	1	Argentina		Chile	
	Arctotis	1	Argentina	S Brasil		Uruguay
	Argyranthemum	1	Argentina		Chile	
	Arnica	1	Argentina		Chile	

Family	Genus	Nº Spp.	Countries				
	Bellis	1	Argentina		Chile		
	Calendula	3	Argentina		Chile		Uruguay
	Carduus	5	Argentina	S Brasil	Chile		Uruguay
	Carthamus	2	Argentina	S Brasil	Chile		Uruguay
	Chondrilla	1	Argentina				
	Chrysanthemoides	1			Chile		
	Chrysanthemum	2	Argentina		Chile		Uruguay
	Cichorium	1	Argentina	S Brasil	Chile		Uruguay
	Cirsium	2	Argentina	S Brasil	Chile	Paraguay	Uruguay
	Cladanthus	1	Argentina	S Brasil	Chile		Uruguay
	Coleostephus	1	Argentina	S Brasil	Chile		Uruguay
	Crepis	4	Argentina	S Brasil	Chile		Uruguay
	Cynara	1	Argentina	S Brasil	Chile		Uruguay
	Dahlia	1	Argentina				
	Delairea	1	Argentina		Chile		Uruguay
	Dyssodia	1	Argentina				
	Emilia	1	Argentina	S Brasil		Paraguay	
	Euryops	1	Argentina				
	Gazania	1	Argentina				
	Gynura	1	Argentina				
	Hedypnois	1	Argentina		Chile		Uruguay
	Helianthus	4	Argentina				Uruguay
	Heterotheca	1	Argentina				
	Lactuca	4	Argentina	S Brasil	Chile	Paraguay	Uruguay
	Lapsana	1	Argentina	S Brasil	Chile		
	Leontodon	4	Argentina		Chile		
	Leucanthemum	1	Argentina	S Brasil	Chile		Uruguay
	Logfia	1			Chile		
	Malacothrix	1	Argentina		Chile		
	Matricaria	2	Argentina	S Brasil	Chile	Paraguay	Uruguay
	Microseris	1			Chile		
	Montanoa	1	Argentina				
	Onopordum	2	Argentina	S Brasil	Chile		Uruguay
	Picris	1	Argentina		Chile		Uruguay
	Ratibida	1	Argentina				
	Rhaponticum	1	Argentina				
	Scolymus	1	Argentina		Chile		
	Scorzonera	1	Argentina				
	Silybum	1	Argentina	S Brasil	Chile		Uruguay
	Sonchus	4	Argentina	S Brasil	Chile	Paraguay	Uruguay
	Struchium	1		S Brasil			
	Tanacetum	3	Argentina	S Brasil	Chile		Uruguay
	Tithonia	2	Argentina				

Family	Genus	Nº Spp.	Countries			
	Tolpis	1			Chile	
	Tragopogon	3	Argentina		Chile	
	Tripleurospermum	1	Argentina		Chile	Uruguay
	Urospermum	1	Argentina		Chile	Uruguay
Athyriaceae	*Deparia*	1	Argentina	S Brasil		
Balsaminaceae	*Impatiens*	3	Argentina	S Brasil		
Bignoniaceae	*Campsis*	1	Argentina			
	Podranea	1	Argentina	S Brasil		
Boraginaceae	*Anchusa*	1	Argentina			
	Asperugo	1	Argentina			
	Borago	1	Argentina		Chile	Uruguay
	Echium	1	Argentina		Chile	
	Lithospermum	2	Argentina			Uruguay
	Lycopsis	1	Argentina			
	Omphalodes	1			Chile	
	Symphytum	1	Argentina			
Brassicaceae	*Aethionema*	1	Argentina			
	Alliaria	1	Argentina			
	Alyssum	1	Argentina		Chile	
	Arabidopsis	1	Argentina		Chile	Uruguay
	Arabis	1	Argentina			
	Barbarea	2	Argentina		Chile	
	Brassica	5	Argentina		Chile	Paraguay Uruguay
	Cakile	1	Argentina			Uruguay
	Camelina	3	Argentina		Chile	Uruguay
	Capsella	1	Argentina	S Brasil	Chile	Uruguay
	Chorispora	1	Argentina		Chile	
	Cochlearia	1	Argentina			
	Diplotaxis	3	Argentina		Chile	Uruguay
	Eruca	1	Argentina		Chile	
	Erysimum	2	Argentina			
	Hesperis	1	Argentina		Chile	
	Hirschfeldia	1	Argentina		Chile	Uruguay
	Hornungia	1	Argentina		Chile	
	Iberis	1	Argentina			
	Isatis	1			Chile	
	Lobularia	1	Argentina		Chile	Uruguay
	Lunaria	1	Argentina			
	Malcolmia	1	Argentina			
	Matthiola	1			Chile	
	Nasturtium	2	Argentina	S Brasil	Chile	Uruguay
	Neslia	1	Argentina			
	Raphanus	3	Argentina	S Brasil	Chile	Paraguay Uruguay

Family	Genus	Nº Spp.	Countries				
	Rapistrum	1	Argentina	S Brasil	Chile	Paraguay	Uruguay
	Sinapis	2	Argentina		Chile	Paraguay	
	Sisymbrium	7	Argentina	S Brasil	Chile		Uruguay
	Strigosella	1	Argentina				
	Teesdalia	1			Chile		
	Thlaspi	1	Argentina		Chile		
Cactaceae	*Cylindropuntia*	1	Argentina		Chile		
	Nopalea	1				Paraguay	
Campanulaceae	*Campanula*	1	Argentina				
	Hippobroma	1		S Brasil			
Cannabaceae	*Humulus*	2	Argentina				
Caprifoliaceae	*Lonicera*	1	Argentina	S Brasil			Uruguay
	Symphoricarpos	1	Argentina				
Caryophyllaceae	*Agrostemma*	1	Argentina		Chile		Uruguay
	Dianthus	2	Argentina		Chile		
	Herniaria	2	Argentina		Chile		
	Holosteum	1	Argentina				
	Lychnis	1		S Brasil	Chile		
	Petrorhagia	3	Argentina		Chile		
	Saponaria	1	Argentina		Chile		Uruguay
	Scleranthus	1	Argentina		Chile		Uruguay
	Vaccaria	1	Argentina				Uruguay
Chenopodiaceae	*Bassia*	2	Argentina				
	Beta	1	Argentina		Chile		
	Blitum	1	Argentina				
	Chenopodiastrum	1	Argentina		Chile		Uruguay
	Cycloloma	1	Argentina				
	Salsola	2	Argentina		Chile		Uruguay
Crassulaceae	*Kalanchoe*	1	Argentina				
Cucurbitaceae	*Citrullus*	2	Argentina	S Brasil		Paraguay	
	Cucumis	1	Argentina	S Brasil		Paraguay	
	Lagenaria	1	Argentina	S Brasil		Paraguay	Uruguay
	Luffa	3	Argentina	S Brasil		Paraguay	
Cupressaceae	*Juniperus*	1	Argentina				
Dipsacaceae	*Dipsacus*	1	Argentina				Uruguay
	Knautia	2	Argentina		Chile		
	Scabiosa	1	Argentina		Chile		Uruguay
Dryopteridaceae	*Cyrtomium*	1	Argentina				
Elaeagnaceae	*Elaeagnus*	1	Argentina				
Euphorbiaceae	*Aleurites*	1	Argentina				
	Breynia	1		S Brasil			
	Mercurialis	1	Argentina		Chile		
	Ricinus	1	Argentina	S Brasil	Chile	Paraguay	Uruguay

Family	Genus	Nº Spp.	Countries				
	Vernicia	1	Argentina				
Fabaceae	*Adenocarpus*	1					Uruguay
	Amorpha	1	Argentina				Uruguay
	Cajanus	1		S Brasil		Paraguay	
	Colutea	1	Argentina				
	Coronilla	1	Argentina				
	Cytisus	2	Argentina		Chile		
	Dipogon	1			Chile		
	Galega	1	Argentina		Chile		Uruguay
	Genista	1	Argentina				
	Lablab	1					Uruguay
	Laburnum	1	Argentina				
	Leucaena	1	Argentina				
	Medicago	9	Argentina	S Brasil	Chile		Uruguay
	Melilotus	4	Argentina	S Brasil	Chile	Paraguay	Uruguay
	Neonotonia	1	Argentina			Paraguay	
	Ononis	1					Uruguay
	Psoralea	1					Uruguay
	Robinia	1	Argentina		Chile		Uruguay
	Spartium	1	Argentina		Chile		Uruguay
	Sphaerophysa	1	Argentina				
	Trigonella	1	Argentina		Chile		
	Ulex	1	Argentina	S Brasil	Chile		Uruguay
Fumariaceae	*Fumaria*	7	Argentina		Chile		Uruguay
Gentianaceae	*Blackstonia*	1	Argentina				Uruguay
Gentianaceae	*Irlbachia*	1				Paraguay	
Hypoxidaceae	*Molineria*	1	Argentina				
Iridaceae	*Belamcanda*	1				Paraguay	
	Chasmanthe	1	Argentina				
	Crocosmia	1	Argentina		Chile		
	Freesia	2	Argentina				
	Gladiolus	2	Argentina				
	Iris	2	Argentina		Chile		Uruguay
	Romulea	1			Chile		
	Sparaxis	2	Argentina		Chile		
	Watsonia	1	Argentina				
Juglandaceae	*Carya*	1	Argentina				
Lamiaceae	*Ballota*	1	Argentina				Uruguay
	Galeopsis	1			Chile		
	Glechoma	1	Argentina		Chile		
	Lamium	3	Argentina		Chile		Uruguay
	Leonotis	1	Argentina	S Brasil		Paraguay	Uruguay
	Leonurus	2	Argentina	S Brasil		Paraguay	Uruguay

Family	Genus	Nº Spp.	Countries				
	Lycopus	1			Chile		
	Marrubium	1	Argentina	S Brasil	Chile		Uruguay
	Melissa	1	Argentina		Chile		Uruguay
	Mentha	4	Argentina	S Brasil	Chile	Paraguay	Uruguay
	Mesosphaerum	1		S Brasil			
	Molucella	1	Argentina		Chile		
	Nepeta	1	Argentina				
	Prunella	1	Argentina	S Brasil	Chile		Uruguay
Lemnaceae	*Landoltia*	1			Chile		
Linderniaceae	*Torenia*	1		S Brasil			
Malvaceae	*Alcea*	1	Argentina				
	Gossypium	1			Chile		
	Malva	7	Argentina	S Brasil	Chile	Paraguay	Uruguay
Meliaceae	*Melia*	1	Argentina	S Brasil	Chile	Paraguay	Uruguay
Montiaceae	*Claytonia*	1	Argentina				
Moraceae	*Broussonetia*	1	Argentina				
Myoporaceae	*Myoporum*	1	Argentina		Chile		Uruguay
Myrtaceae	*Eucalyptus*	2	Argentina				
Nymphaeaceae	*Nelumbo*	1				Paraguay	
Oleaceae	*Fraxinus*	3	Argentina	S Brasil			Uruguay
	Ligustrum	2	Argentina				Uruguay
	Syringa	1	Argentina				
Papaveraceae	*Chelidonium*	1	Argentina				
	Eschscholzia	1	Argentina		Chile		
	Glaucium	1	Argentina				
	Papaver	5	Argentina		Chile		Uruguay
Phrymaceae	*Mazus*	1	Argentina	S Brasil			
Pinaceae	*Pinus*	3	Argentina		Chile		
	Pseudotsuga	1	Argentina				
Plantaginaceae	*Antirrhinum*	2	Argentina				Uruguay
	Cymbalaria	1	Argentina		Chile		Uruguay
	Digitalis	1	Argentina	S Brasil	Chile		Uruguay
	Kickxia	1	Argentina		Chile		Uruguay
	Linaria	3	Argentina	S Brasil	Chile		Uruguay
	Maurandya	3	Argentina	S Brasil			
Poaceae	*Agropyron*	1			Chile		
	Aira	4	Argentina	S Brasil	Chile		Uruguay
	Apera	1	Argentina		Chile		
	Arrhenatherum	1	Argentina		Chile		
	Arundo	1	Argentina	S Brasil	Chile		
	Austrostipa	1	Argentina				
	Avena	6	Argentina	S Brasil	Chile		Uruguay
	Brachypodium	2	Argentina		Chile		Uruguay

Family	Genus	Nº Spp.	Countries				
	Briza	3	Argentina	S Brasil	Chile		Uruguay
	Catapodium	1	Argentina	S Brasil	Chile		Uruguay
	Chrysopogon	1	Argentina			Paraguay	
	Coix	1	Argentina	S Brasil		Paraguay	
	Corynephorus	2	Argentina		Chile		
	Cymbopogon	1	Argentina		Chile		
	Cynosurus	2	Argentina		Chile		Uruguay
	Dactylis	1	Argentina	S Brasil	Chile		Uruguay
	Dactyloctenium	1	Argentina	S Brasil		Paraguay	Uruguay
	Dichanthium	2	Argentina			Paraguay	
	Ehrharta	1	Argentina				
	Elytrigia	1	Argentina		Chile		
	Gaudinia	1	Argentina				Uruguay
	Hackelochloa	1	Argentina			Paraguay	
	Hainardia	1	Argentina		Chile		Uruguay
	Hemarthria	1	Argentina	S Brasil		Paraguay	Uruguay
	Holcus	1	Argentina	S Brasil	Chile		Uruguay
	Lachnagrostis	1	Argentina		Chile		
	Lagurus	1	Argentina	S Brasil	Chile		Uruguay
	Lamarckia	1	Argentina		Chile		
	Leymus	1	Argentina		Chile		
	Megathyrsus	1	Argentina	S Brasil		Paraguay	Uruguay
	Melinis	2	Argentina	S Brasil		Paraguay	Uruguay
	Miscanthus	1			Chile		Uruguay
	Moorochloa	1	Argentina				
	Parapholis	2	Argentina		Chile		Uruguay
	Piptatherum	1	Argentina		Chile		
	Rottboellia	1	Argentina				
	Schedonorus	1	Argentina				
	Schismus	2	Argentina		Chile		
	Sclerochloa	1	Argentina				
	Taeniatherum	1			Chile		
	Themeda	1	Argentina			Paraguay	
	Thinopyrum	1	Argentina				
Polygonaceae	*Antigonon*	1	Argentina			Paraguay	
	Emex	1	Argentina		Chile		Uruguay
	Eriogonum	1	Argentina				
	Fallopia	1			Chile		
Primulaceae	*Centunculus*	1	Argentina	S Brasil	Chile	Paraguay	Uruguay
Proteaceae	*Grevillea*	1	Argentina				
Ranunculaceae	*Aquilegia*	1	Argentina		Chile		
	Ceratocephalus	1	Argentina				
Resedaceae	*Reseda*	4	Argentina		Chile		

Family	Genus	Nº Spp.	Countries				
Rhamnaceae	*Hovenia*	1	Argentina	S Brasil		Paraguay	
Rosaceae	*Cotoneaster*	1	Argentina				
	Crataegus	1	Argentina				
	Duchesnea	1	Argentina	S Brasil	Chile		Uruguay
	Eriobotrya	1	Argentina				
	Malus	2	Argentina				
	Pyracantha	1	Argentina				
	Rosa	5	Argentina		Chile		
	Sanguisorba	1	Argentina		Chile		
	Sorbus	1	Argentina				
	Spiraea	2	Argentina	S Brasil	Chile		
Rubiaceae	*Rubia*	1	Argentina		Chile		
	Sherardia	1	Argentina		Chile		Uruguay
Ruscaceae	*Cordyline*	1	Argentina	S Brasil		Paraguay	Uruguay
Rutaceae	*Citrus*	1	Argentina			Paraguay	
	Poncirus	1	Argentina				
	Ruta	1	Argentina		Chile		
Scrophulariaceae	*Scrophularia*	1			Chile		
	Verbascum	3	Argentina	S Brasil	Chile	Paraguay	Uruguay
Simaroubaceae	*Ailanthus*	1	Argentina		Chile		Uruguay
Solanaceae	*Brugmansia*	1	Argentina	S Brasil		Paraguay	
Tamaricaceae	*Tamarix*	1	Argentina				
Theaceae	*Camellia*	1	Argentina				
Urticaceae	*Soleirolia*	1			Chile		
Valerianaceae	*Centranthus*	1	Argentina				
Vitaceae	*Parthenocissus*	2	Argentina				
	Vitis	1	Argentina				
Zingiberaceae	*Hedychium*	1	Argentina	S Brasil		Paraguay	

Conclusion

The information compiled by these projects has proved the importance and richness of the flora of the temperate and cold-temperate ecosystems studied, the unique elements that integrate them and their relevance in terms of biodiversity. Therefore, continued projects to catalogue and study the vascular plants of meridional South America play an important part in the contribution towards the World Flora and, in a more immediate objective, in their input of data both to GBIF (*Global Biodiversity Information Facility*) and to the *Sistema Nacional de Datos Biológicos* of Argentina.

It is important to highlight as a positive aspect of these projects the cooperation that was established at national and international level with similar projects in neighbouring countries of South America, such as the Flora de Chile (edited by C. Marticorena & R. Rodríguez at the Universidad de Concepción), Flora of Paraguay (edited by L. Ramella & P. Perret, at the Geneva Botánic Garden) and the Lista do Brasil (coordinated by R. Campostrini Forzza, at the Jardim Botanico do Rio de Janeiro), which include shared objectives and work methodology.

As a synthesis, the development of projects to study plant diversity, uniting the work of botanists with tools such as databases, remote access to digitised herbarium specimens and bibliography are extremely beneficial because they lead to:

- Increment in plant knowledge and its availability for conservation purposes, providing a

source of trusted and standardized data regarding Latin American botanical collections.

● Reinforcement of the collaboration between botanical institutes in South America.

● Strenghtening of the institutional activities, facilitating the informatization and digitisation processes of their collections and considerably increasing their visibility.

● Possibility to train young people in botanical collection management and informatization processing, producing high quality data.

● Facilitate taxonomic work by providing non-restricted access to digitised botanical collections together with additional information comprising descriptions, photographs, illustrations, etc.

Looking towards the future, the biggest challenge we face is to obtain a sustainable support, from both the economic and the human points of view. Floristic works are at a disadvantage when compared with other studies that are often punctual and have more immediate results in terms of time, and also by the preference given to researchers who publish their findings in high impact journals. This situation has brought to a diminishing number of botanists being dedicated to floristic and monographic works, likewise to the ongoing important tasks of collecting and identifying plants in general.

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