

# Vascular alien flora, Chile

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**ABSTRACT:** We compiled a list of 737 alien plant species growing in continental Chile. Most names were obtained from herbarium specimens (mainly herbarium CONC at Universidad de Concepción, Chile). More than fifty percent of the species are european in origin. Besides, records also include: traits related to life-cycle and brief coments on origin and history of introduction.

## INTRODUCTION

One of the most striking consequences of globalization is the increase in the problem of alien introduced species. At local and regional extents there is evidence that species richness has increased for many taxonomic groups through the addition of new species (Sax and Gaines 2003). Naturalized and dispersed species add significantly to a country's total biodiversity as well (Pyšek 1998a; Richardson *et al.* 2000; Kühn *et al.* 2004a).

European colonization in South America has been associated to serious landscape modifications after a first (and more important) wave of introductions of European plants in Chile (Mathei 1995, Arroyo *et al.* 2000). A second, more recent wave of arrivals derive from new agricultural techniques and to forestry during the late 20th century (Fuentes *et al.* 2007).

We present here an updated list of the alien plant species reported until now for Chile.

## MATERIALS AND METHODS

Information was gathered mainly from herbaria specimens (mainly CONC and SGO). Main bibliographical sources were Marticorena and Quezada (1985) and Mathei (1995). Records include, besides name and origin, information on life cycle and growth-form after nomenclature in Biolflor database (Kühn *et al.* 2004b; see <http://www.biolflor.de> for further information). The floristic survey included naturalized alien species (establishing sustainable populations, Richardson *et al.* 2000) as well as casuals (no self-replacing populations, relying on repeated human induced introduction, Richardson *et al.*, 2000) being frequently introduced (repeated introductions every year). We also incorporated species whose origin is labelled just as "South American" even though it is impossible to be certain if they were introduced before the arrival of Spanish conquerors. This

database was implemented within the framework of ALARM project (Settele *et al.* 2005).

## RESULTS AND DISCUSSION

In Table 1 we list the 737 alien plant species already recorded for Chile. 156 of them are reported as widely distributed in South America. It is in fact impossible to establish if those species labeled as "South American" arrived into Chilean territory carried *via* human migrations before spanish colonization. The same is valid for the 40 species whose origin is reported as "American" (Table 2). More than a half of the total are european and the best represented genera are *Bromus* (Poaceae) and *Trifolium* (Fabaceae), each one with 15 species. Close to 85% have been reported as weeds at least once, involving a broad range of impacts in agriculture or the environment.

As shown in Table 3, more than 50% of the species belong to the families *Poaceae*, *Asteraceae*, *Fabaceae*, and *Brassicaceae*. These families have been recognized as the most common within alien floras of the world (Pyšek 1998b). Also, *annual* and *perennial* were the most frequent life-cycles (332 and 324 species respectively, Table 4), while herbs (672 species), and shrubs (41 species), were the best represented life-forms (Table 5).

The alien flora represents roughly 14% of the total Chilean flora (Arroyo *et al.* 2000). First inventories date from the nineteenth century, 400 years after the arrival of spanish conquerors. Agricultural practices and associated dramatic landscape changes prompted dispersión and naturalization; in fact, at present most of the species are agricultural weeds. Many of them build large populations taking advantage of man-made habitats such as road-borders, railroads and cities. (Fuentes *et al.* 2004; Lira *et al.* 2008).

TABLE 1. List of alien flora in Chile.

| SPECIES  | FAMILY          | ORIGIN          | FIRST RECORD IN CHILE |
|--|-----------------|-----------------|-----------------------|
| <i>Abutilon grandiflorum</i> G. Don                  | Malvaceae       | Africa-Eurasia  | 1996                  |
| <i>Acacia aroma</i> Gillies ex Hook.                 | Mimosaceae      | South America   | 1955                  |
| <i>Acacia dealbata</i> Link                          | Mimosaceae      | Australia       | 1881                  |
| <i>Acacia horrida</i> Willd                          | Mimosaceae      | Africa          | 1950                  |
| <i>Acacia macracantha</i> Willd                      | Mimosaceae      | South America   | 1955                  |
| <i>Acacia melanoxylon</i> R.Br.                      | Mimosaceae      | Australia       | 1923                  |
| <i>Acacia visco</i> Lorentz.                         | Mimosaceae      | South America   | 1956                  |
| <i>Acaena argentea</i> Ruiz and Pav.                 | Rosaceae        | South America   | 1847                  |
| <i>Acaena pinnatifida</i> Ruiz et Pav.               | Rosaceae        | South America   | 1847                  |
| <i>Achillea millefolium</i> L.                       | Asteraceae      | Europe          | 1875                  |
| <i>Acmella glaberrima</i> (Hassl.) R.K.Jansen        | Asteraceae      | South America   | 1985                  |
| <i>Adiantum capillus-veneris</i> L                   | Adiantaceae     | Europe          | 1861                  |
| <i>Ageratum conyzoides</i> L.                        | Asteraceae      | Central America | 1921                  |
| <i>Agropyron cristatum</i> ( L. ) Gaertner           | Poaceae         | Eurasia         | 1988                  |
| <i>Agrostemma githago</i> L.                         | Caryophyllaceae | Europe          | 1881                  |
| <i>Agrostis capillaris</i> L.                        | Poaceae         | Eurasia         | 1914                  |
| <i>Agrostis castellana</i> Boiss. and Reuter.        | Poaceae         | Europe          | 1924                  |
| <i>Agrostis gigantea</i> Roth                        | Poaceae         | Eurasia         | 1930                  |
| <i>Agrostis scabra</i> Willd.                        | Poaceae         | North America   | 1919                  |
| <i>Agrostis stolonifera</i> L.                       | Poaceae         | Europe          | 1937                  |
| <i>Ailanthus altissima</i> (Mill.) Swingle           | Simaroubaceae   | East of Asia    | 1913                  |
| <i>Aira caryophyllea</i> L.                          | Poaceae         | Europe          | 1854                  |
| <i>Aira elegantissima</i> Schur.                     | Poaceae         | Europe          | 1939                  |
| <i>Aira praecox</i> L.                               | Poaceae         | Europe          | 1884                  |
| <i>Alisma lanceolatum</i> With.                      | Alismataceae    | Europe          | 1928                  |
| <i>Alisma plantago-aquatica</i> L.                   | Alismataceae    | Europe          | 1920                  |
| <i>Allium vineale</i> L.                             | Liliaceae       | Europe          | 1968                  |
| <i>Alnus glutinosa</i> (L.) Gaertn.                  | Betulaceae      | Europe          | 1930                  |
| <i>Alopecurus geniculatus</i> L.                     | Poaceae         | Eurasia         | 1951                  |
| <i>Alopecurus pratensis</i> L.                       | Poaceae         | Eurasia         | 1958                  |
| <i>Alyssum alyssoides</i> (L.) L.                    | Brassicaceae    | Europe          | 1984                  |
| <i>Amaranthus albus</i> L.                           | Amaranthaceae   | North America   | 1887                  |
| <i>Amaranthus cruentus</i> L.                        | Amaranthaceae   | South America   | 1942                  |
| <i>Amaranthus deflexus</i> L.                        | Amaranthaceae   | South America   | 1849                  |
| <i>Amaranthus emarginatus</i> Moq. ex Uline and Bray | Amaranthaceae   | Central America | 1991                  |
| <i>Amaranthus hybridus</i> L.                        | Amaranthaceae   | North America   | 1849                  |
| <i>Amaranthus retroflexus</i> L.                     | Amaranthaceae   | North America   | 1849                  |
| <i>Amaranthus viridis</i> L.                         | Amaranthaceae   | Cosmopolite     | 1849                  |
| <i>Ambrosia arborescens</i> Miller.                  | Asteraceae      | South America   | 1987                  |
| <i>Ambrosia artemisiifolia</i> L.                    | Asteraceae      | Central America | 1959                  |
| <i>Ambrosia peruviana</i> Willd.                     | Asteraceae      | South America   | 1950                  |
| <i>Ambrosia tenuifolia</i> Spreng.                   | Asteraceae      | America         | 1923                  |
| <i>Ammannia coccinea</i> Rottb.                      | Lythraceae      | South America   | 1983                  |
| <i>Ammannia latifolia</i> L.                         | Lythraceae      | America         | 1991                  |
| <i>Ammi majus</i> L                                  | Apiaceae        | Europe          | 1976                  |
| <i>Ammi visnaga</i> L.                               | Apiaceae        | Europe          | 1848                  |
| <i>Ammophila arenaria</i> (L.) Link.                 | Poaceae         | Africa-Eurasia  | 1952                  |

TABLE 1. CONTINUED.

| SPECIES  | FAMILY           | ORIGIN          | FIRST RECORD IN CHILE |
|--|------------------|-----------------|-----------------------|
| <i>Anagallis arvensis</i> L.                   | Primulaceae      | Europe          | 1849                  |
| <i>Anemone decapetala</i> Ard,                 | Ranunculaceae    | South America   | 1845                  |
| <i>Anemone multifida</i> Poir.                 | Ranunculaceae    | America         | 1845                  |
| <i>Anoda cristata</i> (L.) Schltld.            | Malvaceae        | America         | 1846                  |
| <i>Anthemis arvensis</i> L.                    | Asteraceae       | Europe          | 1904                  |
| <i>Anthemis cotula</i> L.                      | Asteraceae       | Europe          | 1848                  |
| <i>Anthoxanthum odoratum</i> L.                | Poaceae          | Europe          | 1875                  |
| <i>Anthriscus caucalis</i> Bieb.               | Apiaceae         | Europe          | 1899                  |
| <i>Anthriscus sylvestris</i> (L.) Hoffm.       | Apiaceae         | Eurasia         | 1973                  |
| <i>Apera interrupta</i> (L.) Beauv.            | Poaceae          | Europe          | 1947                  |
| <i>Aphanes arvensis</i> L.                     | Rosaceae         | Europe          | 1847                  |
| <i>Apium graveolens</i> L.                     | Apiaceae         | Europe          | 1929                  |
| <i>Apium nodiflorum</i> (L.) Lag.              | Apiaceae         | Europe          | 1899                  |
| <i>Aquilegia vulgaris</i> L.                   | Ranunculaceae    | Europe          | 1931                  |
| <i>Arctium minus</i> Bernh.                    | Asteraceae       | Europe          | 1929                  |
| <i>Arctotheca calendula</i> (L.) Levyns.       | Asteraceae       | Africa          | 1940                  |
| <i>Arrhenaterum elatius</i> (L.) J.andC.Presl. | Poaceae          | Europe          | 1921                  |
| <i>Artemisia absinthium</i> L.                 | Asteraceae       | Europe          | 1848                  |
| <i>Arundo donax</i> L.                         | Poaceae          | Asia            | 1948                  |
| <i>Asclepias curassavica</i> L.                | Asclepiadeaceae  | America         | 1930                  |
| <i>Asperugo procumbens</i> L.                  | Boraginaceae     | Europe          | 1988                  |
| <i>Asphodelus fistulosus</i> L.                | Liliaceae        | Europe          | 1987                  |
| <i>Aster squamatus</i> (Spreng) Hier.          | Asteraceae       | South America   | 1848                  |
| <i>Atriplex hortensis</i> L.                   | Chenopodiaceae   | Europe          | 1884                  |
| <i>Atriplex nummularia</i> Lindl.              | Chenopodiaceae   | Australia       | 1982                  |
| <i>Atriplex patula</i> L.                      | Chenopodiaceae   | Europe          | 1967                  |
| <i>Atriplex prostrata</i> Bouch. ex DC.        | Chenopodiaceae   | Europe          | 1881                  |
| <i>Atriplex rosea</i> L.                       | Chenopodiaceae   | Australia       | 1983                  |
| <i>Atriplex semibaccata</i> R. Br.             | Chenopodiaceae   | Australia       | 1927                  |
| <i>Atriplex suberecta</i> Verd.                | Chenopodiaceae   | Africa          | 1982                  |
| <i>Atriplex tatarica</i> L.                    | Chenopodiaceae   | Eurasia         | 1954                  |
| <i>Avena barbata</i> Pott ex Link              | Poaceae          | Europe          | 1854                  |
| <i>Avena fatua</i> L.                          | Poaceae          | Europe          | 1937                  |
| <i>Avena sativa</i> L.                         | Poaceae          | Europe          | 1932                  |
| <i>Avena sterilis</i> L.                       | Poaceae          | Europe          | 1958                  |
| <i>Avena strigosa</i> Schreb.                  | Poaceae          | Europe          | 1927                  |
| <i>Azolla filiculoides</i> Lam.                | Azollaceae       | America         | 1854                  |
| <i>Baccharis pingraea</i> DC                   | Asteraceae       | South America   | 1848                  |
| <i>Barbarea verna</i> (Mill.) Aschers.         | Brassicaceae     | Europe          | 1928                  |
| <i>Bartsia trixago</i> L.                      | Scrophulariaceae | Europe          | 1949                  |
| <i>Bassia hyssopifolia</i> (Pall.) Kuntze      | Chenopodiaceae   | Europe          | 1954                  |
| <i>Bellis perennis</i> L.                      | Asteraceae       | Europe          | 1881                  |
| <i>Beta vulgaris</i> L.                        | Chenopodiaceae   | Europe          | 1849                  |
| <i>Bidens aurea</i> (Aiton) Sherff.            | Asteraceae       | North America   | 1941                  |
| <i>Bidens laevis</i> L.                        | Asteraceae       | North America   | 1848                  |
| <i>Bidens pilosa</i> L.                        | Asteraceae       | Central America | 1848                  |
| <i>Bidens pseudocosmos</i> Sherff.             | Asteraceae       | South America   | 1978                  |

TABLE 1. CONTINUED.

| SPECIES                                       | FAMILY           | ORIGIN              | FIRST RECORD IN CHILE |
|---|------------------|---------------------|-----------------------|
| <i>Bidens subalternans</i> DC                 | Asteraceae       | South America       | 1978                  |
| <i>Boerhavia diffusa</i> L.                   | Nyctaginaceae    | Central America     | 1891                  |
| <i>Borago officinalis</i> L.                  | Boraginaceae     | Europe              | 1849                  |
| <i>Bothriochloa laguroides</i> (DC.) Herter.  | Poaceae          | America             | 1923                  |
| <i>Bothriochloa saccharoides</i> (Sw.) Rydb   | Poaceae          | America             | 1930                  |
| <i>Brachypodium distachyon</i> (L.) Beauv.    | Poaceae          | Europe              | 1975                  |
| <i>Brassica napus</i> L.                      | Brassicaceae     | Europe              | 1846                  |
| <i>Brassica nigra</i> (L.) Koch.              | Brassicaceae     | Europe              | 1846                  |
| <i>Brassica oleracea</i> L.                   | Brassicaceae     | Europe              | 1931                  |
| <i>Brassica rapa</i> L.                       | Brassicaceae     | Europe              | 1846                  |
| <i>Briza maxima</i> L.                        | Poaceae          | Europe              | 1881                  |
| <i>Briza minor</i> L.                         | Poaceae          | Europe              | 1875                  |
| <i>Bromidium anomalum</i> (Trin.) Doell.      | Poaceae          | South America       | 1846                  |
| <i>Bromus berterianus</i> Colla.              | Poaceae          | South America       | 1854                  |
| <i>Bromus catharticus</i> Vahl.               | Poaceae          | South America       | 1854                  |
| <i>Bromus diandrus</i> Roth.                  | Poaceae          | Europe              | 1919                  |
| <i>Bromus erectus</i> Huds.                   | Poaceae          | Europa-Africa       | 1927                  |
| <i>Bromus hordeaceus</i> L.                   | Poaceae          | Europe              | 1922                  |
| <i>Bromus lanceolatus</i> Roth.               | Poaceae          | Europe              | 1830                  |
| <i>Bromus madritensis</i> L.                  | Poaceae          | Europe              | 1875                  |
| <i>Bromus racemosus</i> L.                    | Poaceae          | Europe              | 1947                  |
| <i>Bromus rigidus</i> Roth.                   | Poaceae          | Europe              | 1923                  |
| <i>Bromus scoparius</i> L.                    | Poaceae          | Europe              | 1875                  |
| <i>Bromus secalinus</i> L.                    | Poaceae          | Europe              | 1904                  |
| <i>Bromus squarrosus</i> L.                   | Poaceae          | Europe              | 1986                  |
| <i>Bromus stamineus</i> Desv.                 | Poaceae          | South America       | 1854                  |
| <i>Bromus sterilis</i> L.                     | Poaceae          | Europe              | 1924                  |
| <i>Bromus tectorum</i> L.                     | Poaceae          | Europe              | 1848                  |
| <i>Caesalpinia gilliesii</i> (Hook.) Bentham. | Fabaceae         | South America       | 1950                  |
| <i>Calceolaria tripartita</i> Ruiz and Pav.   | Scrophulariaceae | Central America     | 1917                  |
| <i>Calendula arvensis</i> L.                  | Asteraceae       | Europe              | 1910                  |
| <i>Calendula officinalis</i> L.               | Asteraceae       | Europe              | 1848                  |
| <i>Calendula tripterocarpa</i> Rupr.          | Asteraceae       | Europe              | 1960                  |
| <i>Callitriche terrestris</i> Raf.            | Callitrichaceae  | America             | 1887                  |
| <i>Calyptocarpus vialis</i> Less.             | Asteraceae       | Central America     | 1991                  |
| <i>Calystegia sepium</i> (L.) R.Br            | Convolvulaceae   | Cosmopolite         | 1849                  |
| <i>Camellina alissum</i> (Miller) Thell.      | Brassicaceae     | Europe              | 2001                  |
| <i>Capsella bursa-pastoris</i> (L.) Medik.    | Brassicaceae     | Europe              | 1846                  |
| <i>Cardamine hirsuta</i> L.                   | Brassicaceae     | Europe              | 1846                  |
| <i>Cardaria draba</i> (L.) Desv.              | Brassicaceae     | Europe              | 1937                  |
| <i>Carduus nutans</i> L.                      | Asteraceae       | Europe              | 1960                  |
| <i>Carduus pycnocephalus</i> L.               | Asteraceae       | Europe              | 1928                  |
| <i>Carduus thoermeri</i> Weinm.               | Asteraceae       | Eurasia             | 2000                  |
| <i>Carex brongniartii</i> Kunth               | Cyperaceae       | South America       | 1854                  |
| <i>Carex pseudocyperus</i> L.                 | Cyperaceae       | South America       | 1854                  |
| <i>Carthamus lanatus</i> L.                   | Asteraceae       | Europe              | 1919                  |
| <i>Carthamus tinctorius</i> L.                | Asteraceae       | Mediterranean basin | 1936                  |

TABLE 1. CONTINUED.

| SPECIES   | FAMILY          | ORIGIN          | FIRST RECORD IN CHILE |
|---|-----------------|-----------------|-----------------------|
| <i>Catabrosa aquatica</i> (L.) P. Beauv.                  | Poaceae         | Circumpolar     | 1980                  |
| <i>Catapodium rigidum</i> (L.) C.E. Hubb.                 | Poaceae         | Europe          | 1925                  |
| <i>Cenchrus echinatus</i> L.                              | Poaceae         | Central America | 1917                  |
| <i>Cenchrus incertus</i> Curtis.                          | Poaceae         | Central America | 1939                  |
| <i>Cenchrus myosuroides</i> Kunth.                        | Poaceae         | Central America | 1925                  |
| <i>Centaurea calcitrapa</i> L.                            | Asteraceae      | Europe          | 1925                  |
| <i>Centaurea jacea</i> L.                                 | Asteraceae      | Europe          | 1884                  |
| <i>Centaurea melitensis</i> L.                            | Asteraceae      | Europe          | 1848                  |
| <i>Centaurea nigra</i> L.                                 | Asteraceae      | Europe          | 1984                  |
| <i>Centaurea solstitialis</i> L.                          | Asteraceae      | Europe          | 1956                  |
| <i>Centaurium littorale</i> (Turner ex Sm.) Gilmour.      | Gentianaceae    | Europe          | 1986                  |
| <i>Centaurium pulchellum</i> (Swartz) Druce               | Asteraceae      | Europe          | 1898                  |
| <i>Cerastium arvense</i> L.                               | Caryophyllaceae | Europe          | 1846                  |
| <i>Cerastium fontanum</i> Baumg.                          | Caryophyllaceae | Europe          | 1854                  |
| <i>Cerastium glomeratum</i> Thuill.                       | Caryophyllaceae | Europe          | 1846                  |
| <i>Cestrum parqui</i> L'Hér.                              | Solanaceae      | South America   | 1849                  |
| <i>Chaetotropis chilensis</i> Kunth.                      | Poaceae         | South America   | 1854                  |
| <i>Chamaemelum mixtum</i> (L.) All.                       | Asteraceae      | Europe          | 1920                  |
| <i>Chamomilla recutita</i> (L.) Raus.                     | Asteraceae      | Europe          | 1881                  |
| <i>Chamomilla suaveolens</i> (Pursh) Rydb.                | Asteraceae      | North America   | 1903                  |
| <i>Chenopodium album</i> L.                               | Chenopodiaceae  | Europe          | 1849                  |
| <i>Chenopodium ambrosioides</i> L.                        | Chenopodiaceae  | America         | 1849                  |
| <i>Chenopodium antarcticum</i> (Hook. f.) Benth. et Hook. | Chenopodiaceae  | South America   | 1849                  |
| <i>Chenopodium carnosulum</i> Moq.                        | Chenopodiaceae  | America         | 1895                  |
| <i>Chenopodium ficifolium</i> Sm.                         | Chenopodiaceae  | Europe          | 1849                  |
| <i>Chenopodium glaucum</i> L.                             | Chenopodiaceae  | Eurasia         | 1974                  |
| <i>Chenopodium hircinum</i> Schrad.                       | Chenopodiaceae  | South America   | 1849                  |
| <i>Chenopodium multifidum</i> L.                          | Chenopodiaceae  | South America   | 1895                  |
| <i>Chenopodium murale</i> L.                              | Chenopodiaceae  | Asia Minor      | 1849                  |
| <i>Chenopodium vulvaria</i> L.                            | Chenopodiaceae  | Eurasia         | 1925                  |
| <i>Chiliotrichum diffusum</i> (Forst.f.) Kuntze           | Asteraceae      | South America   | 1848                  |
| <i>Chiliotrichum rosmarinifolium</i> Less                 | Asteraceae      | South America   | 1848                  |
| <i>Chloris gayana</i> Kunth.                              | Poaceae         | Africa          | 1951                  |
| <i>Chloris radiata</i> (L.) Sw.                           | Poaceae         | Central America | 1930                  |
| <i>Chloris virgata</i> Sw.                                | Poaceae         | Central America | 1955                  |
| <i>Chrysanthemoides moniliferum</i> (L.) T.Nord.          | Asteraceae      | Africa          | 1932                  |
| <i>Chrysanthemum coronarium</i> L.                        | Asteraceae      | Europe          | 1881                  |
| <i>Chrysanthemum segetum</i> L.                           | Asteraceae      | Europe          | 1904                  |
| <i>Cichorium intybus</i> L.                               | Asteraceae      | Europe          | 1848                  |
| <i>Cirsium arvense</i> (L.) Scop.                         | Asteraceae      | Europe          | 1937                  |
| <i>Cirsium vulgare</i> (Savi) Ten                         | Asteraceae      | Europe          | 1875                  |
| <i>Clematis bonariensis</i> Juss. ex DC.                  | Ranunculaceae   | South America   | 1966                  |
| <i>Clematis montevidensis</i> Spreng.                     | Ranunculaceae   | South America   | 1956                  |
| <i>Cnicus benedictus</i> L.                               | Asteraceae      | Europe          | 1848                  |
| <i>Coleostephus myconis</i> (L.) Reich.                   | Asteraceae      | Europe          | 1937                  |
| <i>Conium maculatum</i> L.                                | Apiaceae        | Europe          | 1848                  |
| <i>Convolvulus arvensis</i> L.                            | Convolvulaceae  | Europe          | 1848                  |

TABLE 1. CONTINUED.

| SPECIES   | FAMILY           | ORIGIN                  | FIRST RECORD IN CHILE |
|---|------------------|-------------------------|-----------------------|
| <i>Conyza bonariensis</i> (L.) Cronq.                       | Asteraceae       | South America           | 1848                  |
| <i>Conyza floribunda</i> Kunth.                             | Asteraceae       | South America           | 1848                  |
| <i>Coriaria ruscifolia</i> L.                               | Coriariaceae     | South America           | 1846                  |
| <i>Coronopus didymus</i> (L.) Smith.                        | Brassicaceae     | America                 | 1846                  |
| <i>Cotula australis</i> (Sieb.) Hook.                       | Asteraceae       | New Zeland              | 1903                  |
| <i>Cotula coronopifolia</i> L.                              | Asteraceae       | Africa                  | 1857                  |
| <i>Crepis capillaris</i> (L.) Wallr.                        | Asteraceae       | Europe                  | 1881                  |
| <i>Crepis pulchra</i> L.                                    | Asteraceae       | Europe                  | 1990                  |
| <i>Crepis setosa</i> Hall.                                  | Asteraceae       | Europe                  | 1921                  |
| <i>Crepis vesicaria</i> L.                                  | Asteraceae       | Europe                  | 1951                  |
| <i>Crococsmia x crocosmiiflora</i>                          | Iridaceae        | Africa                  | 1929                  |
| <i>Crotalaria grahamiana</i> Wight and Arn.                 | Fabaceae         | India                   | 1982                  |
| <i>Crotalaria incana</i> L.                                 | Fabaceae         | Tropical America-Africa | 1955                  |
| <i>Crotalaria pallida</i> Aiton.                            | Fabaceae         | Africa                  | 1913                  |
| <i>Cyclospermum leptophyllum</i> (Pers.) Sprag.             | Apiaceae         | South America           | 1848                  |
| <i>Cymbalaria muralis</i> P.G. Gaertn., B. Mey. and Scherb. | Scrophulariaceae | Europe                  | 1881                  |
| <i>Cymbopogon citratus</i> Stapf.                           | Poaceae          | India                   | 1963                  |
| <i>Cynara cardunculus</i> L.                                | Asteraceae       | Europe                  | 1848                  |
| <i>Cynodon dactylon</i> (L.) Pers.                          | Poaceae          | Africa                  | 1854                  |
| <i>Cynoglossum creticum</i> Miller.                         | Boraginaceae     | Europe                  | 1907                  |
| <i>Cynoglossum limense</i> Willd.                           | Boraginaceae     | South America           | 1929                  |
| <i>Cynoglossum zeylanicum</i> Brand.                        | Boraginaceae     | India                   | 1941                  |
| <i>Cynosurus cristatus</i> L.                               | Poaceae          | Eurasia                 | 1924                  |
| <i>Cynosurus echinatus</i> L.                               | Poaceae          | Europe                  | 1881                  |
| <i>Cyperus alternifolius</i> L.                             | Cyperaceae       | Madagascar              | 1956                  |
| <i>Cyperus articulatus</i> L.                               | Cyperaceae       | Cosmopolite             | 1854                  |
| <i>Cyperus difformis</i> L.                                 | Cyperaceae       | Europe                  | 1983                  |
| <i>Cyperus eragrostis</i> Lam.                              | Cyperaceae       | Central America         | 1854                  |
| <i>Cyperus laetus</i> Kunth.                                | Cyperaceae       | South America           | 1854                  |
| <i>Cyperus laevigatus</i> L.                                | Cyperaceae       | Europe                  | 1926                  |
| <i>Cyperus rotundus</i> L.                                  | Cyperaceae       | Asia                    | 1929                  |
| <i>Cyperus squarrosus</i> L.                                | Cyperaceae       | Madagascar              | 1925                  |
| <i>Cytisus scoparius</i> (L.) Link.                         | Fabaceae         | Europe                  | 1847                  |
| <i>Cytisus striatus</i> (Hill) Rothm.                       | Fabaceae         | Europe                  | 1897                  |
| <i>Dactylis glomerata</i> L.                                | Poaceae          | Europe                  | 1910                  |
| <i>Datura ferox</i> L.                                      | Solanaceae       | East of Asia            | 1981                  |
| <i>Datura inoxia</i> Miller.                                | Solanaceae       | North America           | 1988                  |
| <i>Datura stramonium</i> L.                                 | Solanaceae       | North America           | 1849                  |
| <i>Daucus carota</i> L.                                     | Apiaceae         | Europe                  | 1848                  |
| <i>Daucus pusillus</i> Michx.                               | Apiaceae         | America?                | 1916                  |
| <i>Deschampsia berteroaana</i> (Kunth) Trin.                | Poaceae          | South America           | 1854                  |
| <i>Deschampsia setacea</i> (Huds.) Hack.                    | Poaceae          | Europe                  | 1930                  |
| <i>Descurainia sophia</i> (L.) Webb.                        | Brassicaceae     | Europe                  | 1846                  |
| <i>Descurainia stricta</i> (Phil.) Prantl ex Reiche         | Brassicaceae     | America                 | 1860                  |
| <i>Dianthus armeria</i> L.                                  | Caryophyllaceae  | Europe                  | 1968                  |
| <i>Dichondra sericea</i> Swartz                             | Convolvulaceae   | America                 | 1849                  |
| <i>Digitalis purpurea</i> L.                                | Scrophulariaceae | Europe                  | 1875                  |

TABLE 1. CONTINUED.

| SPECIES   | FAMILY           | ORIGIN              | FIRST RECORD IN CHILE |
|---|------------------|---------------------|-----------------------|
| <i>Digitaria aequiglumis</i> (Hackel and Arech.) Parodi | Poaceae          | South America       | 1896                  |
| <i>Digitaria ciliaris</i> (Retz.) Koeler.               | Poaceae          | Asia (Pantropical?) | 1913                  |
| <i>Digitaria ischaemum</i> (Schreber) Muhl.             | Poaceae          | Europe              | 1974                  |
| <i>Digitaria sanguinalis</i> (L.) Scop.                 | Poaceae          | Central America     | 1873                  |
| <i>Digitaria setigera</i> Roth ex Roem. et Schult.      | Poaceae          | Tropical Asia       | 1921                  |
| <i>Digitaria violascens</i> Link.                       | Poaceae          | Central America     | 1991                  |
| <i>Diplachne uninervia</i> (C.Presl) Parodi             | Poaceae          | America             | 1854                  |
| <i>Diplotaxis muralis</i> (L.) DC.                      | Brassicaceae     | Europe              | 1937                  |
| <i>Dipsacus sativus</i> (L.) Honck.                     | Dipsacaceae      | Europe              | 1848                  |
| <i>Distichlis spicata</i> (L.) Greene.                  | Poaceae          | America             | 1854                  |
| <i>Dolichos lignosus</i> L.                             | Fabaceae         | Africa              | 1955                  |
| <i>Draba verna</i> L.                                   | Brassicaceae     | Europe              | 1901                  |
| <i>Duchesnea indica</i> (Andr.) Focke                   | Rosaceae         | Asia                | 1919                  |
| <i>Echinochloa colona</i> (L.) Link                     | Poaceae          | Central America     | 1896                  |
| <i>Echinochloa crus-galli</i> (L.) Beauv.               | Poaceae          | Central America     | 1854                  |
| <i>Echinochloa crus-pavonis</i> (H.B.K.) Schult         | Poaceae          | Central America     | 1854                  |
| <i>Echium plantagineum</i> L.                           | Boraginaceae     | Europe              | 1935                  |
| <i>Echium vulgare</i> L.                                | Boraginaceae     | Europe              | 1907                  |
| <i>Eclipta prostrata</i> (L.) L.                        | Asteraceae       | Cosmopolite         | 1848                  |
| <i>Egeria densa</i> Planch.                             | Hydrocharitaceae | South America       | 1956                  |
| <i>Eichornia crassipes</i> (Mart.) Solms.               | Pontederiaceae   | Central America     | 1917                  |
| <i>Eleocharis acicularis</i> (L.) Roemer and Schultes.  | Cyperaceae       | Cosmopolite         | 1985                  |
| <i>Eleocharis nodulosa</i> (Roth) Schult.               | Cyperaceae       | South America       | 1901                  |
| <i>Eleocharis palustris</i> (L.) Roemer and Schultes    | Cyperaceae       | South America       | 1854                  |
| <i>Eleusine indica</i> (L.) Gaertn.                     | Poaceae          | Central America     | 1921                  |
| <i>Eleusine tristachya</i> (Lam.) Lam.                  | Poaceae          | South America       | 1923                  |
| <i>Elodea potamogeton</i> (Bert.) Esp.                  | Hydrocharitaceae | South America       | 1852                  |
| <i>Elytrigia repens</i> L.                              | Poaceae          | Eurasia             | 1854                  |
| <i>Emex spinosa</i> (L.) Campd.                         | Plantaginaceae   | Mediterranean basin | 1998                  |
| <i>Epilobium obscurum</i> Schreb.                       | Onagraceae       | Europe              | 1954                  |
| <i>Epilobium tetragonum</i> L.                          | Onagraceae       | Europe              | 1942                  |
| <i>Equisetum bogotense</i> Kunth.                       | Equisetaceae     | America             | 1854                  |
| <i>Eragrostis curvula</i> (Schrader) Nees.              | Poaceae          | Africa              | 1961                  |
| <i>Eragrostis pilosa</i> (L.) P. Beauv.                 | Poaceae          | Africa              | 1923                  |
| <i>Eragrostis virescens</i> Presl.                      | Poaceae          | South America       | 1854                  |
| <i>Eremocarpus setigerus</i> (Hook.) Benth.             | Euphorbiaceae    | North America       | 1980                  |
| <i>Erigeron karwinskianus</i> DC.                       | Asteraceae       | Central America     | 1934                  |
| <i>Eriochloa montevidensis</i> Griseb.                  | Poaceae          | South America       | 1950                  |
| <i>Erodium botrys</i> (Cav.) Bertol.                    | Geraniaceae      | Europe              | 1846                  |
| <i>Erodium cicutarium</i> (L.) L'Hér                    | Geraniaceae      | Europe              | 1846                  |
| <i>Erodium geoides</i> A.St.-Hil.                       | Geraniaceae      | Africa              | 1930                  |
| <i>Erodium malacoides</i> (L.) L'Her.                   | Geraniaceae      | Europe              | 1846                  |
| <i>Erodium moschatum</i> (L.) L'Hér.                    | Geraniaceae      | Europe              | 1846                  |
| <i>Eruca vesicaria</i> (L.) Cav.                        | Brassicaceae     | Europe              | 1971                  |
| <i>Eryngium rostratum</i> Cav.                          | Apiaceae         | South America       | 1848                  |
| <i>Eschscholtzia californica</i> Cham.                  | Papaveraceae     | North America       | 1881                  |
| <i>Euphorbia cyathophora</i> Murr.                      | Euphorbiaceae    | America             | 1991                  |



TABLE 1. CONTINUED.

| SPECIES  | FAMILY          | ORIGIN          | FIRST RECORD IN CHILE |
|--|-----------------|-----------------|-----------------------|
| <i>Euphorbia falcata</i> L.                              | Euphorbiaceae   | Europe          | 1944                  |
| <i>Euphorbia helioscopia</i> L.                          | Euphorbiaceae   | Europe          | 1938                  |
| <i>Euphorbia hirta</i> L.                                | Euphorbiaceae   | Central America | 1946                  |
| <i>Euphorbia hypericifolia</i> L.                        | Euphorbiaceae   | America         | 1990                  |
| <i>Euphorbia lathyris</i> L.                             | Euphorbiaceae   | Europe          | 1818                  |
| <i>Euphorbia maculata</i> L.                             | Euphorbiaceae   | Central America | 1987                  |
| <i>Euphorbia ovalifolia</i> (Klotz and Garcke) Boissier. | Euphorbiaceae   | South America   | 1944                  |
| <i>Euphorbia pepus</i> L.                                | Euphorbiaceae   | Europe          | 1916                  |
| <i>Euphorbia platyphyllos</i> L.                         | Euphorbiaceae   | Europe          | 1934                  |
| <i>Euphorbia serpens</i> Kunth.                          | Euphorbiaceae   | America         | 1944                  |
| <i>Fallopia convolvulus</i> (L.) A. Löve.                | Polygonaceae    | Europe          | 1932                  |
| <i>Festuca arundinacea</i> Schreber.                     | Poaceae         | Europe          | 1904                  |
| <i>Festuca juncifolia</i> St.-Amans.                     | Poaceae         | Europe          | 1970                  |
| <i>Festuca rubra</i> L.                                  | Poaceae         | Cosmopolite     | 1967                  |
| <i>Filago gallica</i> L.                                 | Asteraceae      | Europe          | 1848                  |
| <i>Flaveria bidentis</i> (L.) Kuntze                     | Asteraceae      | South America   | 1848                  |
| <i>Foeniculum vulgare</i> Miller.                        | Apiaceae        | Europe          | 1848                  |
| <i>Fumaria agraria</i> Lag.                              | Fumariaceae     | Europe          | 1845                  |
| <i>Fumaria capreolata</i> L.                             | Fumariaceae     | Europe          | 1839                  |
| <i>Fumaria parviflora</i> Lam.                           | Fumariaceae     | Europe          | 1869                  |
| <i>Galega officinalis</i> L.                             | Fabaceae        | Europe          | 1881                  |
| <i>Galenia pubescens</i> (Eckl. and Zeyh.) Druce.        | Aizoaceae       | Africa          | 2001                  |
| <i>Galeopsis tetrahit</i> L.                             | Lamiaceae       | Europe          | 1990                  |
| <i>Galinsoga parviflora</i> Cav.                         | Asteraceae      | South America   | 1848                  |
| <i>Galium aparine</i> L.                                 | Rubiaceae       | Europe          | 1848                  |
| <i>Galium murale</i> (L.) All.                           | Rubiaceae       | Europe          | 1914                  |
| <i>Galium tricornutum</i> Dandy.                         | Rubiaceae       | Europe          | 1959                  |
| <i>Gamochaeta spicata</i> (Lam.) Cabrera                 | Asteraceae      | South America   | 1848                  |
| <i>Gamochaeta stachydifolia</i> (Lam.) Cabrera           | Asteraceae      | South America   | 1896                  |
| <i>Gastridium phleoides</i> (Nees and B.Mey.) C.E.Hubb.  | Poaceae         | Europe          | 1854                  |
| <i>Geranium dissectum</i> L.                             | Geraniaceae     | Europe          | 1846                  |
| <i>Geranium molle</i> L.                                 | Geraniaceae     | Europe          | 1896                  |
| <i>Geranium purpureum</i> Vill.                          | Geraniaceae     | Europe          | 1925                  |
| <i>Geranium pusillum</i> Burm.                           | Geraniaceae     | Eurasia         | 1996                  |
| <i>Geranium robertianum</i> L.                           | Geraniaceae     | Europe          | 1846                  |
| <i>Glechoma hederacea</i> L.                             | Lamiaceae       | Europe          | 1931                  |
| <i>Glyceria fluitans</i> (L.) R. Br                      | Poaceae         | Eurasia         | 1943                  |
| <i>Gossypium barbadense</i> L.                           | Malvaceae       | America         | 1931                  |
| <i>Hainardia cylindrica</i> (Willd.) Greuter.            | Poaceae         | Europe          | 1955                  |
| <i>Hedypnois cretica</i> (L.) Dum.-Courset.              | Asteraceae      | Europe          | 1903                  |
| <i>Helianthus tuberosus</i> L.                           | Asteraceae      | North America   | 1848                  |
| <i>Heliotropium curassavicum</i> L.                      | Boraginaceae    | America         | 1849                  |
| <i>Herniaria cinerea</i> DC.                             | Caryophyllaceae | Europe          | 1944                  |
| <i>Hesperis matronalis</i> L.                            | Brassicaceae    | Europe          | 1881                  |
| <i>Hibiscus trionum</i> L.                               | Malvaceae       | Europe          | 1846                  |
| <i>Hieracium aurantiacum</i> L.                          | Asteraceae      | Europe          | 1967                  |
| <i>Hieracium pilosella</i> L.                            | Asteraceae      | Europe          | 1951                  |



TABLE 1. CONTINUED.

| SPECIES   | FAMILY           | ORIGIN          | FIRST RECORD IN CHILE |
|---|------------------|-----------------|-----------------------|
| <i>Hieracium praealtum</i> Vill. ex Gochnat                         | Asteraceae       | Europe          | 1988                  |
| <i>Hirschfeldia incana</i> (L.) Lagreze-Fossat.                     | Brassicaceae     | Europe          | 1963                  |
| <i>Holcus lanatus</i> L.  | Poaceae          | Europe          | 1875                  |
| <i>Hordeum hystrix</i> Roth.  | Poaceae          | Europe          | 1950                  |
| <i>Hordeum jubatum</i> L.   | Poaceae          | North America   | 1955                  |
| <i>Hordeum marinum</i> Huds.  | Poaceae          | Europe          | 1985                  |
| <i>Hordeum murinum</i> L.   | Poaceae          | Europe          | 1854                  |
| <i>Hordeum secalinum</i> L.   | Poaceae          | Europe          | 1854                  |
| <i>Hydrocleys nymphoides</i> (Humb. and Bonpl. ex Willd.) Buchenau. | Butomaceae       | South America   | 1951                  |
| <i>Hydrocotyle bonariensis</i> Lam                                  | Apiaceae         | Central America | 1848                  |
| <i>Hypericum androsaemum</i> L.                                     | Hypericaceae     | Europe          | 1881                  |
| <i>Hypericum perforatum</i> L.                                      | Hypericaceae     | Europe          | 1896                  |
| <i>Hypericum x inodorum</i>   | Hypericaceae     | Europe          | 1919                  |
| <i>Hypochaeris aff. glabra</i> L.                                   | Asteraceae       | Europe          | 1905                  |
| <i>Hypochaeris radicata</i> L.                                      | Asteraceae       | Europe          | 1905                  |
| <i>Imperata condensata</i> Steud.                                   | Poaceae          | South America   | 1854                  |
| <i>Indigofera truxillensis</i> Kunth.                               | Fabaceae         | South America   | 1930                  |
| <i>Ipomoea purpurea</i> (L.) Roth.                                  | Convolvulaceae   | America         | 1849                  |
| <i>Iris pseudacorus</i> L.  | Iridaceae        | Eurasia         | 1995                  |
| <i>Isatis tinctoria</i> L.  | Brassicaceae     | Europe          | 1846                  |
| <i>Juncus bufonius</i> L.   | Juncaceae        | Cosmopolite     | 1854                  |
| <i>Juncus effusus</i> L.  | Juncaceae        | Cosmopolite     | 1915                  |
| <i>Juncus imbricatus</i> Laharpe.                                   | Juncaceae        | South America   | 1854                  |
| <i>Juncus procerus</i> E. Mey                                       | Juncaceae        | South America   | 1854                  |
| <i>Kickxia elatine</i> (L.) Dumort                                  | Scrophulariaceae | Europe          | 1971                  |
| <i>Knautia integrifolia</i> (L.) Bertol.                            | Dipsacaceae      | Europe          | 1987                  |
| <i>Lactuca saligna</i> L.   | Asteraceae       | Europe          | 1960                  |
| <i>Lactuca sativa</i> L.  | Asteraceae       | Europe          | 1955                  |
| <i>Lactuca serriola</i> L.  | Asteraceae       | Europe          | 1905                  |
| <i>Lactuca virosa</i> L.  | Asteraceae       | Europe          | 1933                  |
| <i>Lagurus ovatus</i> L.  | Poaceae          | Europe          | 1881                  |
| <i>Lamarckia aurea</i> (L.) Moench                                  | Poaceae          | Europe          | 1881                  |
| <i>Lamium amplexicaule</i> L.                                       | Lamiaceae        | Europe          | 1908                  |
| <i>Lapsana communis</i> L.  | Asteraceae       | Eurasia         | 1905                  |
| <i>Lathyrus magellanicus</i> Lam.                                   | Fabaceae         | South America   | 1847                  |
| <i>Lathyrus sativus</i> L.  | Fabaceae         | Eurasia         | 1946                  |
| <i>Leontodon autumnalis</i> L.                                      | Asteraceae       | Europe          | 1951                  |
| <i>Leontodon hirtus</i> L.  | Asteraceae       | Europe          | 1976                  |
| <i>Leontodon saxatilis</i> Lam.                                     | Asteraceae       | Europe          | 1935                  |
| <i>Lepidium bonariense</i> L.                                       | Brassicaceae     | South America   | 1846                  |
| <i>Lepidium pseudo-didymus</i> Thell.                               | Brassicaceae     | South America   | 1845                  |
| <i>Leucanthemum vulgare</i> Lam.                                    | Asteraceae       | Europe          | 1875                  |
| <i>Levisticum officinale</i> (L.) Koch.                             | Apiaceae         | Europe          | 1881                  |
| <i>Leymus arenarius</i> (L.) Hochst.                                | Poaceae          | Europe          | 1952                  |
| <i>Limnobium laevigatum</i> (Humb. and Bonpl. ex Willd.) Heine      | Hydrocharitaceae | South America   | 1954                  |
| <i>Linaria texana</i> Scheele.                                      | Scrophulariaceae | Europe          | 1875                  |
| <i>Linaria vulgaris</i> L.  | Scrophulariaceae | Europe          | 1875                  |

TABLE 1. CONTINUED.

| SPECIES  | FAMILY           | ORIGIN          | FIRST RECORD IN CHILE |
|--|------------------|-----------------|-----------------------|
| <i>Lindernia anagallidea</i> (Michx.) Pennell    | Scrophulariaceae | America         | 1911                  |
| <i>Linum bienne</i> Miller.                      | Linaceae         | Europe          | 1917                  |
| <i>Linum catharticum</i> L.                      | Linaceae         | Eurasia         | 1952                  |
| <i>Linum usitatissimum</i> L.                    | Linaceae         | Europe          | 1846                  |
| <i>Lobularia maritima</i> (L.) Desv.             | Brassicaceae     | Europe          | 1846                  |
| <i>Lolium multiflorum</i> Lam.                   | Poaceae          | Europe          | 1854                  |
| <i>Lolium perenne</i> L.                         | Poaceae          | Europe          | 1854                  |
| <i>Lolium rigidum</i> Gaudin                     | Poaceae          | Europe          | 1924                  |
| <i>Lolium temulentum</i> L.                      | Poaceae          | Europe          | 1854                  |
| <i>Lophochloa cristata</i> (L.) Hylander         | Poaceae          | Europe          | 1916                  |
| <i>Lotus angustissimus</i> L.                    | Fabaceae         | Eurasia         | 1978                  |
| <i>Lotus corniculatus</i> L.                     | Fabaceae         | Europe          | 1847                  |
| <i>Lotus pedunculatus</i> Cav.                   | Fabaceae         | Eurasia         | 1921                  |
| <i>Lotus tenuis</i> Waldst et. Kit               | Fabaceae         | Europe          | 1947                  |
| <i>Lotus uliginosus</i> Schkuhr                  | Fabaceae         | Europe          | 1847                  |
| <i>Ludwigia peploides</i> (Kunth) P.H. Raven.    | Onagraceae       | South America   | 1847                  |
| <i>Lupinus albus</i> L.                          | Fabaceae         | Europe          | 1975                  |
| <i>Lupinus angustifolius</i> L.                  | Fabaceae         | Europe          | 1950                  |
| <i>Lupinus arboreus</i> Sims                     | Fabaceae         | North America   | 1881                  |
| <i>Lupinus luteus</i> L.                         | Fabaceae         | Eurasia         | 2008                  |
| <i>Lupinus microcarpus</i> Sims.                 | Fabaceae         | South America   | 1847                  |
| <i>Lychnis coronaria</i> L.                      | Caryophyllaceae  | Europe          | 1918                  |
| <i>Lycopersicon chilense</i> Dunal               | Solanaceae       | South America   | 1852                  |
| <i>Lycopus europaeus</i> L.                      | Lamiaceae        | Europe          | 1965                  |
| <i>Lythrum hyssopifolia</i> L.                   | Lythraceae       | Europe          | 1847                  |
| <i>Lythrum maritimum</i> Kunth.                  | Lythraceae       | South America   | 1974                  |
| <i>Lythrum salicaria</i> L.                      | Lythraceae       | Eurasia         | 1930                  |
| <i>Macroptilium lathyroides</i> (L.) Urb.        | Fabaceae         | Central America | 1847                  |
| <i>Malva assurgentiflora</i> (Kellogg) M. F. Ray | Malvaceae        | North America   | 1948                  |
| <i>Malva dendromorpha</i> M.F.Ray                | Malvaceae        | Europa-Africa   | 1935                  |
| <i>Malva moschata</i> L.                         | Malvaceae        | Europe          | 1932                  |
| <i>Malva neglecta</i> Wallr.                     | Malvaceae        | Europe          | 1846                  |
| <i>Malva nicaeensis</i> All.                     | Malvaceae        | Europe          | 1846                  |
| <i>Malva parviflora</i> L.                       | Malvaceae        | Europe          | 1846                  |
| <i>Malva sylvestris</i> L.                       | Malvaceae        | Europe          | 1954                  |
| <i>Malvastrum coromandelianum</i> (L.) Garcke.   | Malvaceae        | Central America | 1913                  |
| <i>Marrubium vulgare</i> L.                      | Lamiaceae        | Europe          | 1849                  |
| <i>Mecardonia procumbens</i> (Mill.) Small       | Scrophulariaceae | America         | 1991                  |
| <i>Medicago arabica</i> (L.) Huds.               | Fabaceae         | Europe          | 1847                  |
| <i>Medicago arborea</i> L.                       | Fabaceae         | Europe          | 1954                  |
| <i>Medicago lupulina</i> L.                      | Fabaceae         | Europe          | 1847                  |
| <i>Medicago minima</i> (L.) L.                   | Fabaceae         | Europe          | 1847                  |
| <i>Medicago polymorpha</i> L.                    | Fabaceae         | Europe          | 1847                  |
| <i>Medicago sativa</i> L.                        | Fabaceae         | Eurasia         | 1847                  |
| <i>Melilotus albus</i> Desr.                     | Fabaceae         | Eurasia         | 1928                  |
| <i>Melilotus indicus</i> (L.) All.               | Fabaceae         | Europe          | 1847                  |
| <i>Melilotus officinalis</i> L.                  | Fabaceae         | Eurasia         | 2005                  |

TABLE 1. CONTINUED.

| SPECIES   | FAMILY           | ORIGIN                 | FIRST RECORD IN CHILE |
|---|------------------|------------------------|-----------------------|
| <i>Melinis repens</i> (Willd.) Zizka                              | Poaceae          | Africa                 | 1990                  |
| <i>Melissa officinalis</i> L.                                     | Lamiaceae        | Europe                 | 1849                  |
| <i>Mentha aquatica</i> L.   | Lamiaceae        | Europe                 | 1849                  |
| <i>Mentha pulegium</i> L.   | Lamiaceae        | Europe                 | 1849                  |
| <i>Mentha suaveolens</i> L.                                       | Lamiaceae        | Europe                 | 1916                  |
| <i>Mentha x piperita</i>  | Lamiaceae        | Europe                 | 1849                  |
| <i>Mercurialis annua</i> L.                                       | Euphorbiaceae    | Eurasia                | 1931                  |
| <i>Mesembryanthemum crystallinum</i> L.                           | Aizoaceae        | Africa                 | 1881                  |
| <i>Microchloa indica</i> (L. f.) P. Beauv                         | Poaceae          | Australia              | 1927                  |
| <i>Miscanthus sinensis</i> Anderss.                               | Poaceae          | Asia                   | 1925                  |
| <i>Misopates orontium</i> (L.) Rafin.                             | Scrophulariaceae | Europe                 | 1987                  |
| <i>Modiola caroliniana</i> (L.) G. Don.                           | Malvaceae        | Europe                 | 1846                  |
| <i>Muhlenbergia asperifolia</i> (Nees and Meyen ex Trin.) Parodi. | Poaceae          | America                | 1854                  |
| <i>Myosotis arvensis</i> (L.) Hill.                               | Boraginaceae     | Europe                 | 1934                  |
| <i>Myosotis discolor</i> Pers.                                    | Boraginaceae     | Europe                 | 1936                  |
| <i>Myosotis latifolia</i> Poir.                                   | Boraginaceae     | Africa                 | 1933                  |
| <i>Myosotis laxa</i> Lehm.  | Boraginaceae     | North America, Eurasia | 1929                  |
| <i>Myosotis scorpioides</i> Link.                                 | Boraginaceae     | Eurasia                | 1938                  |
| <i>Myosotis stricta</i> Link ex Roem. and Schult.                 | Boraginaceae     | Eurasia                | 1962                  |
| <i>Myriophyllum aquaticum</i> (Velloso) Verdc.                    | Haloragaceae     | South America          | 1847                  |
| <i>Nasturtium officinale</i> R. Br.                               | Brassicaceae     | Europe                 | 1980                  |
| <i>Nicandra physalodes</i> (L.) Gaertn.                           | Solanaceae       | South America          | 1849                  |
| <i>Nicotiana acuminata</i> (Graham) Hook.                         | Solanaceae       | South America          | 1849                  |
| <i>Nicotiana glauca</i> Graham.                                   | Solanaceae       | South America          | 1909                  |
| <i>Nicotiana sylvestris</i> Speg. and Comes                       | Solanaceae       | South America          | 1996                  |
| <i>Nothoscordum gracile</i> (Dryand. Ex Aiton) Stearn             | Liliaceae        | South America          | 1896                  |
| <i>Nymphaea alba</i> L.   | Fabaceae         | Europe                 | 1992                  |
| <i>Oenothera rosea</i> L'Hér. ex Ait.                             | Onagraceae       | America                | 1928                  |
| <i>Oenothera stricta</i> Ledeb. ex Link                           | Onagraceae       | South America          | 1847                  |
| <i>Omphalodes linifolia</i> (L.) Moench.                          | Boraginaceae     | Europe                 | 1943                  |
| <i>Onopordum acanthium</i> L.                                     | Asteraceae       | Europe                 | 1881                  |
| <i>Ornithopus compressus</i> L.                                   | Fabaceae         | Europe                 | 1950                  |
| <i>Ornithopus pinnatus</i> (Miller) Druce.                        | Fabaceae         | Europe                 | 1953                  |
| <i>Ornithopus sativus</i> Brot.                                   | Fabaceae         | Europe                 | 1930                  |
| <i>Orobanche minor</i> Smith                                      | Orobanchaceae    | Europe                 | 1952                  |
| <i>Orobanche ramosa</i> L.  | Orobanchaceae    | Europe                 | 1986                  |
| <i>Oryza sativa</i> L.  | Poaceae          | Asia                   | 1933                  |
| <i>Ovidia pillopillo</i> (Gay) Meissner.                          | Thymelaeaceae    | South America          | 1851                  |
| <i>Oxalis articulata</i> Savign.                                  | Oxalidaceae      | South America          | 1973                  |
| <i>Oxalis corniculata</i> L.                                      | Oxalidaceae      | Europe                 | 1846                  |
| <i>Oxalis pes-caprae</i> L.                                       | Oxalidaceae      | Africa                 | 1916                  |
| <i>Panicum capillare</i> L.                                       | Poaceae          | North America          | 1926                  |
| <i>Panicum dicotomiflorum</i> Michx.                              | Poaceae          | Central America        | 1983                  |
| <i>Panicum miliaceum</i> L.                                       | Poaceae          | Asia                   | 1881                  |
| <i>Papaver dubium</i> L.  | Papaveraceae     | Europe                 | 1998                  |
| <i>Papaver hybridum</i> L.  | Papaveraceae     | Europe                 | 1999                  |
| <i>Papaver rhoeas</i> L.  | Papaveraceae     | Europe                 | 1845                  |

TABLE 1. CONTINUED.

| SPECIES  | FAMILY           | ORIGIN                  | FIRST RECORD IN CHILE |
|--|------------------|-------------------------|-----------------------|
| <i>Papaver somniferum</i> L.                                       | Papaveraceae     | Europe                  | 1845                  |
| <i>Parapholis incurva</i> (L.) Hubb.                               | Poaceae          | Europe                  | 1940                  |
| <i>Parapholis strigosa</i> (Dumort.) C.E.Hubb.                     | Poaceae          | Europe                  | 1942                  |
| <i>Parentucellia latifolia</i> (L.) Caruel.                        | Scrophulariaceae | Europe                  | 1982                  |
| <i>Parentucellia viscosa</i> (L.) Caruel                           | Scrophulariaceae | Europe                  | 1959                  |
| <i>Parietaria judaica</i> L.                                       | Urticaceae       | Europe                  | 1962                  |
| <i>Pascalina glauca</i> Ortega                                     | Asteraceae       | South America           | 1895                  |
| <i>Paspalum dasylepulum</i> Kunze ex E. Desv.                      | Poaceae          | South America           | 1854                  |
| <i>Paspalum dilatatum</i> Poir.                                    | Poaceae          | South America           | 1935                  |
| <i>Paspalum paspalodes</i> (Michx.) Scribner                       | Poaceae          | Central America         | 1854                  |
| <i>Paspalum urvillei</i> Steud.                                    | Poaceae          | South America           | 1936                  |
| <i>Paspalum vaginatum</i> Swartz.                                  | Poaceae          | America                 | 1854                  |
| <i>Passiflora foetida</i> L.                                       | Passifloraceae   | Asia                    | 1930                  |
| <i>Pastinaca sativa</i> L.   | Apiaceae         | Europe                  | 1881                  |
| <i>Pennisetum chilense</i> (Desvaux) Jackson ex Fries              | Poaceae          | South America           | 1854                  |
| <i>Pennisetum clandestinum</i> Hochst. ex Chiov.                   | Poaceae          | Africa                  | 1986                  |
| <i>Pennisetum villosum</i> R. Br. ex Fresen.                       | Poaceae          | Africa                  | 1928                  |
| <i>Petrorhagia dubia</i> (Raf.) G. López and Romo                  | Caryophyllaceae  | Europe                  | 1934                  |
| <i>Petrorhagia prolifera</i> (L.) P.W. Ball and Heywood.           | Caryophyllaceae  | Europe                  | 1942                  |
| <i>Petunia parviflora</i> Juss.                                    | Solanaceae       | America                 | 1998                  |
| <i>Phalaris aquatica</i> L.  | Poaceae          | Europe                  | 1926                  |
| <i>Phalaris arundinacea</i> L.                                     | Poaceae          | Eurasia                 | 1932                  |
| <i>Phalaris canariensis</i> L.                                     | Poaceae          | Europe                  | 1925                  |
| <i>Phalaris caroliniana</i> Walt.                                  | Poaceae          | North America           | 1932                  |
| <i>Phalaris minor</i> Retz.  | Poaceae          | Eurasia                 | 1925                  |
| <i>Phleum pratense</i> L.  | Poaceae          | Eurasia                 | 1920                  |
| <i>Phragmites australis</i> (Cav.) Trin.                           | Poaceae          | Cosmopolite             | 1854                  |
| <i>Phyla canescens</i> (Kunth) Greene                              | Verbenaceae      | Tropical America-Africa | 1849                  |
| <i>Phyla reptans</i> (Kunth) Greene.                               | Verbenaceae      | Central America         | 1849                  |
| <i>Physalis peruviana</i> L.                                       | Solanaceae       | South America           | 1849                  |
| <i>Physalis pubescens</i> L.                                       | Solanaceae       | America                 | 1849                  |
| <i>Physalis viscosa</i> L.   | Solanaceae       | South America           | 1927                  |
| <i>Picris echioides</i> L.   | Asteraceae       | Europe                  | 1928                  |
| <i>Piptatherum miliaceum</i> (L.) Coss.                            | Poaceae          | Europe                  | 1959                  |
| <i>Pitraea cuneato-ovata</i> (Cav.) Caro                           | Verbenaceae      | South America           | 1849                  |
| <i>Plantago coronopus</i> L.                                       | Plantaginaceae   | Europe                  | 1940                  |
| <i>Plantago lanceolata</i> L.                                      | Plantaginaceae   | Europe                  | 1910                  |
| <i>Plantago major</i> L.   | Plantaginaceae   | Europe                  | 1932                  |
| <i>Pluchea absinthoides</i> (Hook. et Arn.) H. Robinson and Cuatr. | Asteraceae       | South America           | 1848                  |
| <i>Poa annua</i> L.  | Poaceae          | Europe                  | 1854                  |
| <i>Poa bulbosa</i> L.  | Poaceae          | Eurasia-Africa          | 1996                  |
| <i>Poa compressa</i> L.  | Poaceae          | Eurasia-Africa          | 1955                  |
| <i>Poa glauca</i> Vahl   | Poaceae          | Eurasia                 | 1949                  |
| <i>Poa infirma</i> Kunth   | Poaceae          | Europe                  | 1939                  |
| <i>Poa nemoralis</i> L.  | Poaceae          | Europe                  | 1952                  |
| <i>Poa pratensis</i> L.  | Poaceae          | Europe                  | 1854                  |
| <i>Poa stenantha</i> Trin.   | Poaceae          | America                 | 1938                  |

TABLE 1. CONTINUED.

| SPECIES   | FAMILY           | ORIGIN          | FIRST RECORD IN CHILE |
|---|------------------|-----------------|-----------------------|
| <i>Poa trivialis</i> L.   | Poaceae          | Eurasia-Africa  | 1924                  |
| <i>Polycarpon tetraphyllum</i> (L.) L.                            | Caryophyllaceae  | Europe          | 1847                  |
| <i>Polygonum acuminatum</i> Kunth.                                | Polygonaceae     | North America   | 1913                  |
| <i>Polygonum aviculare</i> L.                                     | Polygonaceae     | Asia            | 1851                  |
| <i>Polygonum campanulatum</i> Hook.                               | Polygonaceae     | Asia            | 1990                  |
| <i>Polygonum hydropiper</i> (L.) Spach.                           | Polygonaceae     | Europe          | 1960                  |
| <i>Polygonum hydropiperoides</i> Michx.                           | Polygonaceae     | America         | 1851                  |
| <i>Polygonum lapathifolium</i> L.                                 | Polygonaceae     | Europe          | 1851                  |
| <i>Polygonum maritimum</i> L.                                     | Polygonaceae     | Eurasia         | 1930                  |
| <i>Polygonum orientale</i> L.                                     | Polygonaceae     | Asia            | 1935                  |
| <i>Polygonum persicaria</i> L.                                    | Polygonaceae     | Europe          | 1851                  |
| <i>Polypogon maritimus</i> Willd.                                 | Poaceae          | Eurasia-Africa  | 1967                  |
| <i>Polypogon monspeliensis</i> (L.) Desf.                         | Poaceae          | Europe          | 1854                  |
| <i>Polypogon viridis</i> (Gouan) Breistr.                         | Poaceae          | Europe          | 1927                  |
| <i>Porophyllum ruderale</i> (Jacq.) Cass.                         | Asteraceae       | South America   | 2001                  |
| <i>Portulaca oleracea</i> L.                                      | Portulacaceae    | Europe          | 1847                  |
| <i>Potamogeton pusillus</i> L.                                    | Potamogetonaceae | Cosmopolite     | 1852                  |
| <i>Potentilla anserina</i> L.                                     | Rosaceae         | Europe          | 1913                  |
| <i>Potentilla reptans</i> L.                                      | Rosaceae         | Eurasia         | 1922                  |
| <i>Prunella vulgaris</i> L.                                       | Lamiaceae        | Europe          | 1881                  |
| <i>Pseudognaphalium cheiranthifolium</i> (Lam.) Hillart and Burt. | Asteraceae       | South America   | 1896                  |
| <i>Pseudognaphalium luteoalbum</i> (L.) Hilliard and Burt         | Asteraceae       | Europe          | 1848                  |
| <i>Ranunculus apiifolius</i> Pers.                                | Ranunculaceae    | South America   | 1845                  |
| <i>Ranunculus arvensis</i> L.                                     | Ranunculaceae    | Europe          | 1989                  |
| <i>Ranunculus muricatus</i> L.                                    | Ranunculaceae    | Europe          | 1845                  |
| <i>Ranunculus parviflorus</i> L.                                  | Ranunculaceae    | Europe          | 1945                  |
| <i>Ranunculus repens</i> L.                                       | Ranunculaceae    | Europe          | 1875                  |
| <i>Ranunculus sceleratus</i> L.                                   | Ranunculaceae    | Europe          | 1969                  |
| <i>Raphanus raphanistrum</i> L.                                   | Brassicaceae     | Europe          | 1937                  |
| <i>Raphanus sativus</i> L.  | Brassicaceae     | Europe          | 1846                  |
| <i>Rapistrum rugosum</i> (L.) All.                                | Brassicaceae     | Europe          | 1928                  |
| <i>Reseda decursiva</i> Forssk.                                   | Resedaceae       | Eurasia         | 1916                  |
| <i>Reseda lutea</i> L.  | Resedaceae       | Europe          | 1940                  |
| <i>Reseda odorata</i> L.  | Resedaceae       | Europe          | 1991                  |
| <i>Reseda phyteuma</i> L.   | Resedaceae       | Europe          | 1961                  |
| <i>Rhynchosia minima</i> (L.) D.C.                                | Fabaceae         | Australia       | 1955                  |
| <i>Ricinus communis</i> L.  | Euphorbiaceae    | Central America | 1851                  |
| <i>Robinia pseudoacacia</i> L.                                    | Fabaceae         | North America   | 1897                  |
| <i>Rorippa nasturtium-aquaticum</i> (L.) Schinz and Thell.        | Brassicaceae     | Europe          | 1846                  |
| <i>Rorippa sylvestris</i> (L.) Bess.                              | Brassicaceae     | Europe          | 1933                  |
| <i>Rosa canina</i> L.   | Rosaceae         | Eurasia         | 1999                  |
| <i>Rosa rubiginosa</i> L.   | Rosaceae         | Europe          | 1875                  |
| <i>Rostraria cristata</i> (L.) Tzvelev.                           | Poaceae          | Europe          | 1916                  |
| <i>Rubia tinctorum</i> L.   | Rubiaceae        | Europe          | 1900                  |
| <i>Rubus constrictus</i> Muell. et Lef.                           | Rosaceae         | Europe          | 1928                  |
| <i>Rubus ulmifolius</i> Schott                                    | Rosaceae         | Europe          | 1897                  |
| <i>Rumex acetosa</i> L.   | Polygonaceae     | Europe          | 1993                  |

TABLE 1. CONTINUED.

| SPECIES   | FAMILY           | ORIGIN               | FIRST RECORD IN CHILE |
|---|------------------|----------------------|-----------------------|
| <i>Rumex acetosella</i> L.                        | Polygonaceae     | Europe               | 1851                  |
| <i>Rumex conglomeratus</i> Murray.                | Polygonaceae     | Europe               | 1917                  |
| <i>Rumex crispus</i> L.                           | Polygonaceae     | Europe               | 1851                  |
| <i>Rumex cristatus</i> DC.                        | Polygonaceae     | Mediterranean basin  | 1999                  |
| <i>Rumex longifolius</i> DC.                      | Polygonaceae     | Europe               | 1932                  |
| <i>Rumex obtusifolius</i> L.                      | Polygonaceae     | Europe               | 1924                  |
| <i>Rumex pulcher</i> L.                           | Polygonaceae     | Europe               | 1875                  |
| <i>Rumex sanguineus</i> L.                        | Polygonaceae     | Africa               | 1987                  |
| <i>Ruta chalepensis</i> L.                        | Rutaceae         | Europe               | 1911                  |
| <i>Sagina apetala</i> Ard.                        | Caryophyllaceae  | Europe               | 1846                  |
| <i>Sagina procumbens</i> L.                       | Caryophyllaceae  | Europe               | 1924                  |
| <i>Salix babylonica</i> L.                        | Salicaceae       | Asia                 | 1970                  |
| <i>Salix viminalis</i> L.                         | Salicaceae       | Eurasia              | 1929                  |
| <i>Salsola kali</i> L.                            | Chenopodiaceae   | Asia Minor           | 1849                  |
| <i>Salvinia auriculata</i> Aubl.                  | Salviniaceae     | Tropical America     | 1961                  |
| <i>Sambucus nigra</i> L.                          | Caprifoliaceae   | Eurasia              | 1929                  |
| <i>Samolus valerandi</i> L.                       | Primulaceae      | Subcosmopolite       | 1899                  |
| <i>Sanguisorba minor</i> Scop.                    | Rosaceae         | Europe               | 1875                  |
| <i>Sapindus saponaria</i> L.                      | Sapindaceae      | North America        | 1998                  |
| <i>Saponaria officinalis</i> L.                   | Caryophyllaceae  | Europe               | 1881                  |
| <i>Saxifraga umbrosa</i> L.                       | Saxifragaceae    | Europe               | 1932                  |
| <i>Scabiosa atropurpurea</i> L.                   | Dipsacaceae      | Europe               | 1848                  |
| <i>Scandix pecten-veneris</i> L.                  | Apiaceae         | Europe               | 1899                  |
| <i>Schismus arabicus</i> Nees                     | Poaceae          | Africa               | 1927                  |
| <i>Schismus barbatus</i> (L.) Thell.              | Poaceae          | Europe               | 1926                  |
| <i>Schizachyrium sanguineum</i> (Retz.) Alston    | Poaceae          | America, Cosmopolita | 1941                  |
| <i>Schkuhria pinnata</i> (Lam.) Kuntze ex Thell.  | Asteraceae       | South America        | 1895                  |
| <i>Scirpus californicus</i> (C.A.Mey.) Steud.     | Cyperaceae       | South America        | 1854                  |
| <i>Scirpus mucronatus</i> L.                      | Cyperaceae       | Eurasia              | 1938                  |
| <i>Scleranthus annuus</i> L.                      | Caryophyllaceae  | Europe               | 1937                  |
| <i>Scolymus hispanicus</i> L.                     | Asteraceae       | Europe               | 1881                  |
| <i>Scrophularia auriculata</i> L.                 | Scrophulariaceae | Europe               | 1928                  |
| <i>Sedum acre</i> L.                              | Crassulaceae     | Eurasia              | 1936                  |
| <i>Selaginella apoda</i> (L.) Fernald             | Selaginellaceae  | Cosmopolite          | 1975                  |
| <i>Senecio angulatus</i> L. fil.                  | Asteraceae       | Africa               | 1919                  |
| <i>Senecio aquaticus</i> Hill.                    | Asteraceae       | Europe               | 1895                  |
| <i>Senecio mikanioides</i> Otto ex Walp.          | Asteraceae       | Africa               | 1949                  |
| <i>Senecio sylvaticus</i> L.                      | Asteraceae       | Europe               | 1917                  |
| <i>Senecio vulgaris</i> L.                        | Asteraceae       | Europe               | 1854                  |
| <i>Senna bicapsularis</i> (L.) Roxb.              | Fabaceae         | America              | 1944                  |
| <i>Sesuvium portulacastrum</i> (L.) L.            | Caryophyllaceae  | America              | 1979                  |
| <i>Setaria adhaerens</i> (Forssk.) Chiov.         | Poaceae          | Europa-Africa        | 1987                  |
| <i>Setaria glauca</i> (L.) Beauv.                 | Poaceae          | Europe               | 1982                  |
| <i>Setaria parviflora</i> (Poir.) Kerguélen.      | Poaceae          | America              | 1854                  |
| <i>Setaria pumila</i> (Poir.) Roemer and Schultes | Poaceae          | Europe               | 1980                  |
| <i>Setaria verticillata</i> (L.) Beauv.           | Poaceae          | Europe               | 1896                  |
| <i>Setaria viridis</i> (L.) Beauv.                | Poaceae          | Europe               | 1955                  |

TABLE 1. CONTINUED.

| SPECIES   | FAMILY           | ORIGIN          | FIRST RECORD IN CHILE |
|---|------------------|-----------------|-----------------------|
| <i>Sherardia arvensis</i> L.                    | Poaceae          | Europe          | 1914                  |
| <i>Sida rhombifolia</i> L.                      | Malvaceae        | Cosmopolite     | 1942                  |
| <i>Sida spinosa</i> L.                          | Malvaceae        | Central America | 1937                  |
| <i>Sigesbeckia jorullensis</i> Kunth.           | Asteraceae       | Central America | 1903                  |
| <i>Silene armeria</i> L.                        | Caryophyllaceae  | Europe          | 1881                  |
| <i>Silene gallica</i> L.                        | Caryophyllaceae  | Europe          | 1846                  |
| <i>Silene vulgaris</i> (Moench.) Garcke         | Caryophyllaceae  | Eurasia         | 1933                  |
| <i>Silybum marianum</i> L.                      | Asteraceae       | Europe          | 1848                  |
| <i>Sisymbrium altissimum</i> L.                 | Brassicaceae     | Eurasia         | 1953                  |
| <i>Sisymbrium austriacum</i> Jacq.              | Brassicaceae     | Europe          | 1942                  |
| <i>Sisymbrium irio</i> L.                       | Brassicaceae     | Europe          | 1929                  |
| <i>Sisymbrium officinale</i> (L.) Scop.         | Brassicaceae     | Europe          | 1846                  |
| <i>Sisymbrium orientale</i> L.                  | Brassicaceae     | Europe          | 1929                  |
| <i>Sium latifolium</i> L.                       | Apiaceae         | Europe          | 1941                  |
| <i>Solanum eleagnifolium</i> Cav.               | Solanaceae       | America         | 1849                  |
| <i>Solanum marginatum</i> L. f.                 | Solanaceae       | Africa          | 1881                  |
| <i>Solanum nigrum</i> L.                        | Solanaceae       | Europe          | 1849                  |
| <i>Solanum pseudocapsicum</i> L.                | Solanaceae       | America         | 1961                  |
| <i>Solanum radicans</i> L.f.                    | Solanaceae       | South America   | 1920                  |
| <i>Solanum sisymbriifolium</i> Lam.             | Solanaceae       | South America   | 1923                  |
| <i>Soleirolia soleirolii</i> (Req.) Dandy.      | Urticaceae       | Eurasia         | 1926                  |
| <i>Solidago chilensis</i> Meyen                 | Asteraceae       | South America   | 1848                  |
| <i>Soliva pterosperma</i> (Juss.) Less.         | Asteraceae       | South America   | 1903                  |
| <i>Soliva sessilis</i> Ruiz et Pavón            | Asteraceae       | South America   | 1848                  |
| <i>Soliva valdiviana</i> Phil.                  | Asteraceae       | South America   | 1864                  |
| <i>Sonchus arvensis</i> L.                      | Asteraceae       | Europe          | 1848                  |
| <i>Sonchus asper</i> (L.) Hill.                 | Asteraceae       | Europe          | 1848                  |
| <i>Sonchus oleraceus</i> L.                     | Asteraceae       | Europe          | 1848                  |
| <i>Sonchus tenerrimus</i> L.                    | Asteraceae       | Europe          | 1864                  |
| <i>Sorghum halepense</i> (L.) Pers.             | Poaceae          | Africa          | 1924                  |
| <i>Spartium junceum</i> L.                      | Fabaceae         | Europe          | 1847                  |
| <i>Spergula arvensis</i> L.                     | Caryophyllaceae  | Europe          | 1895                  |
| <i>Spergularia bocconeii</i> (Scheele) Graebner | Caryophyllaceae  | Europe          | 1930                  |
| <i>Spergularia marina</i> (L.) Besser.          | Caryophyllaceae  | Europe          | 1925                  |
| <i>Spergularia media</i> (L.) K. Presl          | Caryophyllaceae  | Eurasia         | 1912                  |
| <i>Spergularia rubra</i> Pers.                  | Caryophyllaceae  | Europe          | 1846                  |
| <i>Spilanthes leiocarpa</i> DC.                 | Asteraceae       | South America   | 1981                  |
| <i>Sporobolus indicus</i> (L.) R. Br.           | Poaceae          | Central America | 1854                  |
| <i>Sporobolus virginicus</i> (L.) Kunth         | Poaceae          | Central America | 1955                  |
| <i>Stachys arvensis</i> L.                      | Lamiaceae        | Europe          | 1963                  |
| <i>Stachys grandidentata</i> Lindl.             | Lamiaceae        | South America   | 1849                  |
| <i>Stellaria media</i> (L.) Vill.               | Caryophyllaceae  | Europe          | 1846                  |
| <i>Stellaria pallida</i> (Dumort.) Piré.        | Caryophyllaceae  | Europe          | 1960                  |
| <i>Stemodia durantifolia</i> (L.) Sw.           | Scrophulariaceae | America         | 1849                  |
| <i>Stenotaphrum secundatum</i> (Walter) Kuntze. | Poaceae          | South America   | 1923                  |
| <i>Stipa leptostachya</i> Griseb.               | Poaceae          | South America   | 1950                  |
| <i>Stipa neesiana</i> Trinius et Ruprecht.      | Poaceae          | South America   | 1854                  |



TABLE 1. CONTINUED.

| SPECIES   | FAMILY           | ORIGIN        | FIRST RECORD IN CHILE |
|---|------------------|---------------|-----------------------|
| <i>Taeniatherum caput-medusae</i> (L.) Nevski.    | Poaceae          | Europe        | 1986                  |
| <i>Tanacetum parthenium</i> (L.) Schultz-Bip.     | Asteraceae       | Europe        | 1848                  |
| <i>Tanacetum vulgare</i> L.                       | Asteraceae       | Europe        | 1919                  |
| <i>Tarasa tenella</i> (Cav.) Krapov.              | Malvaceae        | South America | 1846                  |
| <i>Taraxacum officinale</i> Weber.                | Asteraceae       | Europe        | 1875                  |
| <i>Teesdalia nudicaulis</i> (L.) R.Br.            | Brassicaceae     | Europe        | 1988                  |
| <i>Teline monspessulana</i> (L.) K. Koch.         | Fabaceae         | Europe        | 1847                  |
| <i>Tetragonia tetragonoides</i> (Pall.) Kuntze    | Aizoaceae        | Africa        | 1847                  |
| <i>Thlaspi arvense</i> L.                         | Brassicaceae     | Europe        | 1985                  |
| <i>Tolpis barbata</i> (L.) Gaertner.              | Asteraceae       | Europe        | 1881                  |
| <i>Torilis arvensis</i> (Huds.) Link              | Apiaceae         | Europe        | 1990                  |
| <i>Torilis nodosa</i> (L.) Gaertner.              | Apiaceae         | Europe        | 1848                  |
| <i>Tradescantia fluminensis</i> Vell.             | Commelinaceae    | South America | 1938                  |
| <i>Tragopogon porrifolius</i> L.                  | Asteraceae       | Europe        | 1881                  |
| <i>Tribulus terrestris</i> L.                     | Zygophyllaceae   | Europe        | 1891                  |
| <i>Trifolium angustifolium</i> L.                 | Fabaceae         | Europe        | 1974                  |
| <i>Trifolium arvense</i> L.                       | Fabaceae         | Europe        | 1926                  |
| <i>Trifolium aureum</i> Pollich                   | Fabaceae         | Europe        | 1936                  |
| <i>Trifolium campestre</i> Schreber.              | Fabaceae         | Europe        | 1897                  |
| <i>Trifolium dubium</i> Sibth.                    | Fabaceae         | Europe        | 1897                  |
| <i>Trifolium fragiferum</i> L.                    | Fabaceae         | Eurasia       | 1957                  |
| <i>Trifolium glomeratum</i> L.                    | Fabaceae         | Europe        | 1922                  |
| <i>Trifolium hybridum</i> L.                      | Fabaceae         | Europe        | 1971                  |
| <i>Trifolium incarnatum</i> L.                    | Fabaceae         | Europe        | 1932                  |
| <i>Trifolium pratense</i> L.                      | Fabaceae         | Europe        | 1920                  |
| <i>Trifolium repens</i> L.                        | Fabaceae         | Europe        | 1897                  |
| <i>Trifolium striatum</i> L.                      | Fabaceae         | Europe        | 1897                  |
| <i>Trifolium subterraneum</i> L.                  | Fabaceae         | Eurasia       | 1974                  |
| <i>Trifolium suffocatum</i> L.                    | Fabaceae         | Eurasia       | 1950                  |
| <i>Trifolium tomentosum</i> L.                    | Fabaceae         | Europe        | 1948                  |
| <i>Trigonella monspeliaca</i> L.                  | Fabaceae         | Eurasia       | 1951                  |
| <i>Tripleurospermum maritimum</i> (L.) Koch.      | Asteraceae       | Australia     | 1971                  |
| <i>Tripleurospermum perforatum</i> (Mérat) Láinz. | Asteraceae       | Europe        | 1903                  |
| <i>Tropaeolum majus</i> L.                        | Tropaeolaceae    | South America | 1951                  |
| <i>Typha domingensis</i> Pers.                    | Thyphaceae       | South America | 1985                  |
| <i>Ulex europaeus</i> L.                          | Fabaceae         | Europe        | 1847                  |
| <i>Urospermum picroides</i> (L.) Scop. ex F.W.    | Asteraceae       | Europe        | 1881                  |
| <i>Urtica dioica</i> L.                           | Urticaceae       | South America | 1850                  |
| <i>Urtica urens</i> L.                            | Urticaceae       | Europe        | 1851                  |
| <i>Valerianella eriocarpa</i> Desv.               | Valerianaceae    | Eurasia       | 1943                  |
| <i>Valerianella locusta</i> L.                    | Valerianaceae    | Europe        | 1915                  |
| <i>Valerianella rimosa</i> Bast.                  | Valerianaceae    | Eurasia       | 1995                  |
| <i>Verbascum thapsus</i> L.                       | Scrophulariaceae | Eurasia       | 1881                  |
| <i>Verbascum virgatum</i> Stokes.                 | Scrophulariaceae | Europe        | 1895                  |
| <i>Verbena bonariensis</i> L.                     | Verbenaceae      | South America | 1908                  |
| <i>Verbena litoralis</i> Kunth                    | Verbenaceae      | America       | 1849                  |
| <i>Verbena officinalis</i> L.                     | Verbenaceae      | Europe        | 1929                  |

TABLE 1. CONTINUED.

| SPECIES  | FAMILY           | ORIGIN              | FIRST RECORD IN CHILE |
|--|------------------|---------------------|-----------------------|
| <i>Verbena rigida</i> Spreng.                        | Verbenaceae      | South America       | 1987                  |
| <i>Verbesina aurita</i> Phil.                        | Asteraceae       | South America       | 1881                  |
| <i>Verbesina encelioides</i> (Cav.) Benth. and Hook. | Asteraceae       | America             | 1945                  |
| <i>Veronica anagallis-aquatica</i> L.                | Scrophulariaceae | Eurasia             | 1895                  |
| <i>Veronica arvensis</i> L.                          | Scrophulariaceae | Asia                | 1895                  |
| <i>Veronica beccabunga</i> L.                        | Scrophulariaceae | Mediterranean basin | 1979                  |
| <i>Veronica chamaedrys</i> L.                        | Scrophulariaceae | Central Europe      | 1929                  |
| <i>Veronica officinalis</i> L.                       | Scrophulariaceae | Eurasia             | 1932                  |
| <i>Veronica peregrina</i> L.                         | Scrophulariaceae | America             | 1994                  |
| <i>Veronica persica</i> Poir.                        | Scrophulariaceae | Europe              | 1909                  |
| <i>Veronica scutellata</i> L.                        | Scrophulariaceae | Europe              | 1932                  |
| <i>Veronica serpyllifolia</i> L.                     | Scrophulariaceae | Eurasia             | 1895                  |
| <i>Vestia foetida</i> (R. et P.) Hoff-               | Solanaceae       | South America       | 1849                  |
| <i>Vicia benghalensis</i> L.                         | Fabaceae         | Europe              | 1897                  |
| <i>Vicia hirsuta</i> (L.) Gray.                      | Fabaceae         | Europe              | 1897                  |
| <i>Vicia sativa</i> L.                               | Fabaceae         | Europe              | 1847                  |
| <i>Vicia tenuissima</i> (M. Bieb.) Schinz and Thell. | Fabaceae         | Central Europe      | 1987                  |
| <i>Vicia tetrasperma</i> (L.) Schreb.                | Fabaceae         | Europe              | 1897                  |
| <i>Vicia villosa</i> Roth                            | Fabaceae         | Europe              | 1897                  |
| <i>Vinca major</i> L.                                | Apocynaceae      | Europe              | 1881                  |
| <i>Viola arvensis</i> Murray.                        | Violaceae        | Europe              | 1943                  |
| <i>Viola odorata</i> L.                              | Violaceae        | Eurasia             | 1923                  |
| <i>Viola tricolor</i> L.                             | Violaceae        | Europe              | 1846                  |
| <i>Vulpia bromoides</i> (L.) Gray                    | Poaceae          | Europe              | 1854                  |
| <i>Vulpia eriolepis</i> (Desv.) Blom.                | Poaceae          | South America       | 1854                  |
| <i>Vulpia muralis</i> (Kunth) Nees                   | Poaceae          | Europe              | 1854                  |
| <i>Vulpia myuros</i> (L.) C.C. Gmelin.               | Poaceae          | Europe              | 1854                  |
| <i>Waltheria indica</i> L.                           | Sterculiaceae    | America             | 1925                  |
| <i>Xanthium catharticum</i> Kunth.                   | Asteraceae       | South America       | 1902                  |
| <i>Xanthium cavanillesii</i> Schouw                  | Asteraceae       | South America       | 1848                  |
| <i>Xanthium spinosum</i> L.                          | Asteraceae       | South America       | 1848                  |
| <i>Zannichellia palustris</i> L.                     | Zannichelliaceae | Cosmopolite         | 1852                  |

**TABLE 2.** Origin and number of species of alien flora in Chile.

| ORIGIN              | SPECIES |
|---------------------|---------|
| Europe              | 385     |
| South America       | 115     |
| Eurasia             | 60      |
| America             | 44      |
| Central America     | 36      |
| Africa              | 27      |
| North America       | 20      |
| Asia                | 18      |
| Cosmopolite         | 13      |
| Australia           | 8       |
| India               | 3       |
| Madagascar          | 2       |
| circumpolar         | 2       |
| New Zeland          | 1       |
| cultive             | 1       |
| undetermined        | 1       |
| without information | 1       |

**TABLE 3.** List of families with number of genera, species and percent over total alien flora in Chile.

| FAMILY           | GENERA | SPECIES | %  |
|------------------|--------|---------|----|
| Poaceae          | 69     | 157     | 21 |
| Asteraceae       | 68     | 118     | 16 |
| Fabaceae         | 23     | 63      | 8  |
| Brassicaceae     | 23     | 35      | 5  |
| Scrophulariaceae | 14     | 25      | 3  |
| Caryophyllaceae  | 15     | 25      | 3  |
| Chenopodiaceae   | 5      | 21      | 3  |
| Solanaceae       | 9      | 20      | 3  |
| Polygonaceae     | 3      | 19      | 3  |
| Apiaceae         | 14     | 19      | 3  |
| Malvaceae        | 9      | 16      | 2  |
| Cyperaceae       | 4      | 15      | 2  |
| Boraginaceae     | 7      | 15      | 2  |
| Lamiaceae        | 9      | 14      | 2  |
| Euphorbiaceae    | 4      | 14      | 2  |
| Rosaceae         | 6      | 12      | 2  |
| Ranunculaceae    | 4      | 11      | 1  |
| Geraniaceae      | 2      | 10      | 1  |
| Other families   | 82     | 128     | 19 |

**TABLE 4.** Types of life-cycle and number of species of alien flora in Chile.

| LIFE-CYCLE          | SPECIES |
|---------------------|---------|
| annual              | 333     |
| perennial           | 325     |
| variable life-cycle | 55      |
| biannual            | 19      |
| without information | 5       |

**TABLE 5.** Growing form and number of species of alien flora in Chile.

| GROWING FORM | SPECIES |
|--------------|---------|
| herb         | 672     |
| shrub        | 41      |
| tree         | 13      |
| climber      | 10      |
| subshrub     | 1       |

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