Checklist for the crop weeds of Paraguay

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Abstract
Paraguay, a country whose economy is based mainly on agriculture and livestock for export, has experienced a major expansion in mechanized crops during the last few decades. Despite being heavily dependent on agriculture, Paraguay has very limited research on crop weeds, in spite of these having a high economic impact on production. This work aims to update and enhance the knowledgebase on the most common weeds affecting productive fields throughout the different ecoregions of Paraguay. We present here the first checklist of crop weeds for the country, which includes a total of 256 taxa (189 species, 10 subspecies, 54 varieties and 3 forms), with the most species-rich families being Poaceae and Asteraceae followed by Malvaceae, Amaranthaceae, Fabaceae and Solanaceae. The list includes three new records for the country. Synonyms, distribution details within Paraguay, habit and a voucher specimen are provided for each taxon.

Keywords
Weeds, crops, Paraguay, agro-ecosystems, new records
Introduction

Weeds can be defined as plants (not necessarily alien) that grow on sites where they are not wanted and which have a detectable economic and/or environmental impact (Richardson et al. 2000, Pyšek et al. 2004). They overlap partly with invasive plants, which are introduced species that cause problems, either in agriculture or in natural areas. According to Pyšek et al. (2004), there have been terminological misunderstandings in studies dealing with plant invasions, partly caused by different perceptions of plant invasions by particular biological disciplines and viewpoints. As shown by these authors, plants encroaching on habitats in which they were not present before can be assessed from the ecological point of view (and termed colonizers), from the biogeographical point of view (invaders, or alien plants in a more general sense), or from the anthropocentric point of view (termed weeds, harmful species, problem plants, noxious plants, pests, etc.).

Paraguay has a total area of 406,752 km² and is divided into two regions by the Río Paraguay: the Oriental Region and the Occidental Region. The economy is based mainly on agriculture and livestock for export; between the years 2013–2014, approximately 52,381 km² were dedicated to temporary and permanent crops (DGEEC 2015), particularly soybean (35,000 km²), corn (8,000 km²) and wheat (5,600 km²). During the second half of the twentieth century, global soy production grew tenfold from 27 million tons to 269 million tons (WWF 2016). This increased production was the result of a major expansion in mechanized crops, including other crops that form part of this complex such as wheat, corn, sorghum, canola, among others. It is expected that production will double by 2050 (Bruinsma 2009, WWF 2014). Indeed, Paraguay plays a strong role in this soybean industry; during the 2012–2013 harvest, Paraguay ranked sixth as a global producer and fourth in exports. Itapúa and Alto Paraná have been the highest producing departments, while expansion currently occurs in the departments of San Pedro, Canindeyú and Alto Paraguay (WWF 2016).

Agriculture in Paraguay is carried out on a variety of very distinct soil types in both natural regions. The soils in the Oriental Region are for the most part reddish in colour, resulting from geological events during the Precambrian era and Jurassic and Cretaceous periods (Bertoni and Gorham 1973). These soils include the leptosols and arenosols, which are generally poor in nutrients, and the loamy sand and sandy loam regosols, which are rich in nutrients and where most of the mechanized crops in the region have been carried out (González Erico 2007). In the Occidental Region, most of the soil types are brackish, with a variable content of clay, including planosols, solonetz, gleysols and regosols, where mechanized crops are carried out (Proyecto Sistema Ambiental del Chaco 1992–1997).

Despite being mainly an agricultural country, Paraguay does not have much in terms of research on crop weeds, even in cases where these have a high economic impact on production. Only two sources can actually be considered as references on the subject: Lurvey (1983), the only weed guide available for the country, and the Flora del Paraguay collection (Spichiger and Bocquet 1983–1985, Spichiger 1987–1989,
Spichiger and Ramella 1990–2002, Ramella and Perret 2008–2014) that superficially covers the behavior of some species, in terms of their weediness, within the families included in the collection. Even herbarium data has proved to be of little use to determine the level of weediness of a species, due to the well-known biases in plant collection towards natural areas.

Weeds have a particular set of skills for survival through mechanisms such as high competitive ability, high seed production, seed production for as long as growing conditions permit, rapid growth throughout vegetative phase to flowering, germination requirements fulfilled in many environments, adaptations for short and long dispersal and great longevity of seeds, self-compatible but not completely autogamous or apomictic, and when cross-pollinated, either pollinated by unspecialized visitors or by wind (Baker 1965, Baker 1974, Lorenzi 2000). Their development in productive areas tends to reduce the quality and quantity of the crop yield, making it difficult to harvest, and in some extreme cases even making it unviable (Guglieri-Caporal et al. 2011). According to Pott et al. (2006), success in controlling invasive plants begins with the floristic inventory of the infesting species and knowledge of the biology of those species that are predominant.

Because of their numerous interactions with humans, their biology, ecology, evolution and community dynamics, weeds are an important subject of study (Kuester et al. 2014). In fact, the study of plant species considered to be weeds in agro-ecosystems is a subject of high interest in the area of invasion ecology, not only because of their natural ability to become established in natural and semi-natural environments (Figueroa et al. 2004, Pyšek et al. 2004) with the consequent great ecological harm they can cause to ecosystems, but also because of the special attributes that make these plant species more invasive (Rejmánek and Richardson 1996), and the way they respond to human disturbance (Hill et al. 2002). Other studies have also focused on revealing taxonomic patterns among natural area invaders and agricultural weeds (Daehler 1998, Kuester et al. 2014), while Conservation Agriculture builds upon weed ecology to generate integrated and sustainable weed management strategies (Bajwa 2014).

Regarding the increasing importance of weed science in a country such as Paraguay, which depends heavily on agricultural production, this work aims to update and enhance the knowledgebase of the most common weeds affecting productive fields throughout the different ecoregions of the country, as well as the generation of relevant information to facilitate their identification and management.

**Methods**

Paraguay is a land-locked country located between 19° and 28° south latitude and 54° and 63° west longitude at the heart of the South American continent, and lies entirely within the Río de la Plata drainage system, second only in size to the Amazon basin. The country is divided into two regions by the Río Paraguay: the Oriental Region, or eastern region, also known as the Paraná region, and the Occidental Region, or western
region, also known as the Chaco (part of the Gran Chaco Americano shared by Argentina, Bolivia and Paraguay). Paraguay is divided into 17 departments, 14 of which are located to the east of the Río Paraguay (De Egea et al. 2012).

While building the checklist, we included: 1) a survey of all plant species occurring in key sites, mainly in areas of mechanized soybean, sorghum, sugarcane, corn and rice, where weed management and control was being periodically implemented (Figure 1, Table 1). Each site was surveyed once, at a time when crop fields presented a high level of weed infestation and prior to any weed control activities. Sampling was carried out between 1–3 days, depending on the size of the available crop area per site, by surveying a series of random points (up to 8 per day) to collect the weeds occurring within a 50 meter radius. The data collection included the random collection of plant specimens, georeferencing of the records, the identification of specimens and the resolution of taxonomic problems. Where possible, specimens were collected in quadruplicate; the set of originals were stored in FCQ and duplicates were sent to BM, G and CTES; and 2) the systematization of data available in the literature. Three sources were considered as reference: Lurvey (1983), the Flora del Paraguay collection, and the database of The International Survey of Herbicide Resistant Weeds (Heap 2016), containing a list of the more resistant weed species in the region. Online databases and herbarium resources such as TROPICOS (2016) and the Catálogo de las plantas vasculares del Cono Sur (Zuloaga and Belgrano 2015) were also consulted.
| Map key | Department     | Locality                                                                 | Type of habitat/crop                  |
|--------|----------------|--------------------------------------------------------------------------|---------------------------------------|
| 1      | Alto Paraná    | Colonia Yguazú, Centro de Investigación Agropecuaria del Paraguay         | Soybean crops                         |
| 2      | Alto Paraná    | Hernandarias                                                             | Soybean crops                         |
| 3      | Alto Paraná    | Minga Guazú, Universidad Nacional del Este (UNE) experimental plots       | Soybean crops                         |
| 4      | Boquerón       | Estancia Toro Mocho                                                      | Cattle pastures and forest edges      |
| 5      | Boquerón       | Mariscal Estigarribia, Estancia Jeroviá                                  | Soybean and sorghum crops             |
| 6      | Caaguazú       | Juan Eulogio Estigarribia                                                | Soybean crops                         |
| 7      | Central        | Areguá                                                                   | Strawberry crops                      |
| 8      | Central        | Asunción                                                                 | Vegetable patch/home garden           |
| 9      | Central        | Asunción                                                                 | Disturbed soils                       |
| 10     | Central        | San Lorenzo, Universidad Nacional de Asunción, experimental plot          | Potato, tomato and cabbage crops      |
| 11     | Guairá         | Villarrica                                                               | Disturbed soils                       |
| 12     | Itapúa         | Capitán Miranda                                                          | Soybean crops                         |
| 13     | Itapúa         | Nueva Alborada District                                                  | Soybean crops                         |
| 14     | Itapúa         | Pirapó                                                                   | Soybean crops                         |
| 15     | Misiones       | San Miguel, Establecimiento La Graciela                                  | Rice crops                            |
| 16     | Misiones       | Villa Florida                                                            | Disturbed soils                       |
| 17     | Paraguarí      | Villarrica – Paraguarí road                                              | Sugarcane crops                       |
| 18     | San Pedro      | Barrio San Pedro, Dekalpar crops                                         | Corn crops                            |
| 19     | San Pedro      | Cruce Liberación                                                        | Disturbed soils                       |
| 20     | San Pedro      | Instituto Paraguayo de Tecnología Agrícola (IPTA) experimental plots      | Fruit crops                           |

Data was compiled in a MS Access database. Flowering plant family circumscription follows APG III (Stevens 2001 onwards) and pteridophyte classification follows Smith et al. (2006). In the checklist, families are sorted alphabetically and genera are sorted alphabetically within families. For each taxon we present the accepted name, place and date of publication, synonyms, habit, general distribution in Paraguay, residence status (all species are native except where indicated), and one voucher specimen. Relevant bibliographic citations are included for taxa recorded in literature, but not found during field surveys nor in the consulted herbaria (BM, CTES, FCQ, and PY). Synonymy follows Zuloaga and Belgrano (2015), except for those taxa covered in more recent literature. Herbarium acronyms used in the text follow Index Herbariorum (Thiers, continuously updated). New reports of taxa for Paraguay are marked with an arrowhead (►) and those taxa not cited in Zuloaga and Belgrano (2015) for Paraguay but recorded in other publications or databases are marked with an asterisk (*).
Data resources

All occurrence data underpinning the checklist have been uploaded to the Natural History Museum Data Portal (http://dx.doi.org/10.5519/0060042) and are provided as a data supplement to this paper.

Results and discussion

The list includes a total of 256 taxa (189 species, 10 subspecies, 54 varieties and 3 forms), making up 38 families and 141 genera, of which all except one are angiosperms. There is only one pteridophyte listed, *Pteridium arachnoideum* (Kaulf.) Maxon, a very close relative of *Pteridium aquilinum* (L.) Kuhn, a cosmopolitan species with a vigorous vegetative reproductive system (Baker 1974), which is a very common weed worldwide.

The most species-rich families are Poaceae, Asteraceae and Malvaceae, followed by Amaranthaceae, Fabaceae, Solanaceae, Polygonaceae and Cyperaceae (see Table 2). According to Baker (1974), Malvaceae, Amaranthaceae, Cyperaceae and Poaceae are the families which have a higher number of weed species in warm regions, in line with our results.

Over eighty-three percent (213) of the species in the Checklist are herbs, 14.8% (38) woody species (small trees, shrubs or subshrubs) and only 1.95% (5) are vines (Figure 2).

The majority of the listed taxa are native to Paraguay (209), representing 81.64% of the total, including one endemic species (*Turnera grandidentata* (Urb.) Arbo), while the remaining 47 taxa are introduced. Families with the highest number of non-native species are Poaceae with 16 taxa followed by Brassicaceae with 4 taxa. Most introduced species remain within the status of established plants, except for some species which also show invasive behaviour. Such is the case of *Calotropis procera* (Aiton) W.T.Aiton, reported for the first time in Paraguay in 1994 (Mereles and Degen 1994), found

| Families       | Genera | Taxa |
|----------------|--------|------|
| Poaceae        | 22     | 50   |
| Asteraceae     | 29     | 41   |
| Malvaceae      | 11     | 20   |
| Amaranthaceae  | 4      | 13   |
| Fabaceae       | 9      | 12   |
| Solanaceae     | 3      | 12   |
| Polygonaceae   | 2      | 11   |
| Cyperaceae     | 4      | 10   |
| Euphorbiaceae  | 5      | 10   |
| Other families | 52     | 77   |
in cattle pastures in northern Paraguay, and currently quite frequent as a weed of difficult eradication within the dry Chaco. *Urochloa brizantha* (Hochst. ex A.Rich.) R.D.Webster and *U. decumbens* (Stapf) R.D.Webster are also two species that were introduced for grazing (Zuloaga et al. 2014), and are now found in both natural and agro-ecosystems. These three species were also identified as invasive species in Brazil (Base de dados nacional de espécies exóticas invasoras I3N Brasil 2016).

The list includes three new records for the country, collected during crop surveys (*Avena sativa* (J.Presl.) Barkworth subsp. *sativa*, *Cyperus eragrostis* Lam. var. *eragrostis* and *Leonurus cardiaca* L. It also includes another seven taxa not listed in Zuloaga & Belgrano (2015), as being present in Paraguay, but recorded in TROPICOS (2016) or in recent publications (De Egea et al. 2016): *Amaranthus hybridus* L. subsp. *cruentus* (L.) Thell., *Avena sativa* L. subsp. *sativa*, *Capsella bursa-pastoris* (L.) Medik., *Commelina benghalensis* L., *Cyperus eragrostis* Lam. var. *eragrostis*, *Glandularia cabrerae* (Mol-denke) Botta, *Leonurus cardiaca* L., *Oldenlandia lancifolia* (Schumach.) DC., *Tragus australianus* and *Tridax procumbens* L.

Eight taxa mentioned in literature, but not found during field surveys nor in the consulted herbaria, were also included in the checklist: *Capsella bursa-pastoris* (L.) Medik., *Lepidium virginicum* L., *Raphanus raphanistrum* L. (Lurvey 1983), *Digitaria aequiglumis* (Hack. & Arechav.) Parodi var. *aequiglumis*, *Echinochloa oryzoides* (Ard.) Fritsch (Zuloaga et al. 1994), *Paspalum urvillei* Steud., *Setaria scandens* Schrad. (Zuloaga et al. 2014), and *Polygonum aviculare* L. (Cialdella and Brandbyge 2001).

Nine species were found to be the most frequent and abundant within all crops surveyed: *Amaranthus hybridus* L., *Bidens pilosa* L., *Conyza bonariensis* (L.) Cronquist, *Commelina erecta* L., *Eleusine indica* (L.) Gaertn., *Euphorbia heterophylla* L., *Digitaria insularis* (L.) Fedde, *Richardia brasiliensis* Gomes, and *Solanum americanum* Mill. These species were found in both natural regions of Paraguay and on different soil types, showing a greater plasticity/resilience than the other species found. Overall, they
are species with high adaptability, fast growth, resistance to drought and high biomass and seed production. It is also likely that the seeds of these weed species accompany the seeds of the harvested grain crops. All these have been listed and highlighted in regional literature on weeds as being problematic species (Ferrari 2012, Guglieri-Caporal 2011, Lorenzi 2000), and with the exception of *Commelina erecta* and *Richardia brasilienensis*, are considered among the weeds with greatest herbicide resistance according to The International Survey of Herbicide Resistant Weeds (Heap 2016).

**Checklist**

**FERNS**

**DENNSTAEDTIACEAE**

*Pteridium arachnoideum* (Kaulf.) Maxon, J. Wash. Acad. Sci. 14: 89. 1924.

Syn.: *Pteridium aquilinum* (L.) Kuhn var. *arachnoideum* (Kaulf.) Brade, *Pteridium aquilinum* ssp. *psittacinum* (C.Presl) C.Chr, *Pteridium aquilinum* var. *umbrosum* H.Christ, nom. illeg., *Pteridium caudatum* (L.) Maxon ssp. *arachnoideum* (Kaulf.) Lellinger, *Pteridium esculentum* (G.Forst.) Cockayne ssp. *arachnoideum* (Kaulf.) J.A.Thomson, *Pteridium psittacinum* (C.Presl) Maxon, *Pteris aquilina* L. var. *arachnoidea* (Kaulf.) D.C.Eaton, *Pteris aquilina* var. *psittacina* (C.Presl) Baker, *Pteris arachnoidea* Kaulf., *Pteris esculenta* G.Forst., *Pteris psittacina* C.Presl.

Herb.
Departmental distribution: Amambay, Caazapá, Canindeyú, Cordillera, Guairá, Paraguarí, San Pedro.
Voucher: *J. De Egea et al. 1340* (BM, FCQ, G).

**SEED PLANTS**

**ACANTHACEAE**

*Justicia squarrosa* Griseb., Abh. Königl. Ges. Wiss. Göttingen 19: 226. 1874.

Syn.: *Beloperone ciliata* (Nees) Hook.f., *B. squarrosa* (Griseb.) Lindau, *Dianthera ciliata* (Nees) Benth. & Hook.f., hom. illeg., *Jacobinia ciliata* Nees.

Herb or subshrub.
Departmental distribution: Alto Paraguay, Boquerón, Presidente Hayes.
Voucher: *F. Mereles & S. Soria 9978* (FCQ).
ALISMATACEAE

*Sagittaria montevidensis* Cham. & Schltdl. subsp. *montevidensis*, Linnaea 2: 156. 1827.

Syn.: *Sagittaria andina* Phil., *S. montevidensis* f. *normalis* Hauman, nom. inval., *S. multinervia* Larrañaga, *S. pugioniformis* L. var. *montevidensis* (Cham. & Schltdl.) Kuntze

Herb.

Departmental distribution: Alto Paraguay, Amambay, Boquerón, Caaguazú, Caazapá, Central, Concepción, Cordillera, Guairá, Itapúa, Misiones, Ñeembucú, Paraguarí, Presidente Hayes, San Pedro.

Voucher: *G. Céspedes et al. 445* (BM, FCQ).

AMARANTHACEAE

*Alternanthera ficoidea* (L.) P.Beauv., Fl. Oware 2: 66. 1818.

Syn.: *Alternanthera polygonoides* (L.) R.Br. ex Griseb. var. *diffusa* (Mart.) Hicken, *A. tenella* Colla, *Bucholzia ficoidea* (L.) Mart., *Gomphrena ficoidea* L.

Herb.

Departmental distribution: Alto Paraguay, Alto Paraná, Amambay, Central, Presidente Hayes, San Pedro.

Voucher: *J. De Egea et al. 1230* (FCQ).

*Alternanthera paronichyoides* A.St.-Hil. subsp. *chacoënsis* (Morong ex Morong & Britton) Pedersen, Darwiniana 14: 440. 1967.

Syn.: *Alternanthera chacoënsis* Morong ex Morong & Britton, *A. ficoidea* (L.) Sm. ssp. *chacoënsis* (Morong ex Morong & Britton) Pedersen, *A. morongii* Uline, *A. paronichyoides* var. *chacoënsis* (Morong ex Morong & Britton) Pedersen, *A. paronychioides* var. *robusta* Chodat.

Herb.

Departmental distribution: Alto Paraguay, Boquerón, Caaguazú, Central, Concepción, Cordillera, Guairá, Ñeembucú, Paraguarí, Presidente Hayes.

Voucher: *F. Mereles et al. 10060* (FCQ).
Alternanthera philoxeroides (Mart.) Griseb. f. philoxeroides, Abh. Königl. Ges. Wiss. Göttingen 24: 36. 1879.

Syn.: Achyranthes paludosa Bunbury, Achyranthes philoxeroides (Mart.) Standl., Alternanthera philoxeroides (Mart.) Griseb. var. acutifolia (Mart.) Hicken, Alternanthera philoxeroides var. obtusifolia (Moq.) Hicken, Bucholzia philoxeroides Mart., B. philoxeroides var. obtusifolia Mart., Mogiphanes philorexoides D.Parodi, Telanthera philoxeroides (Mart.) Moq., T. philoxeroides var. denticulata Seub., T. philoxeroides var. obtusifolia Moq.

Herb aquatic.
Departmental distribution: Alto Paraguay, Central, Presidente Hayes.
Voucher: N. Soria 332 (FCQ).

*Amaranthus hybridus* L. subsp. cruentus (L.) Thell., Fl. Adv. Montpellier 205. 1912.

Syn.: Amaranthus cruentus L., A. flavus L., A. paniculatus L.

Herb. Introduced.
Departmental distribution: Alto Paraguay, Guairá, San Pedro.
Voucher: F. Mereles & S. Soria 10212 (FCQ).

*Amaranthus hybridus* L. subsp. hybridus, Sp. Pl. 2: 990. 1753.

Syn.: Amaranthus chlorostachys Willd., A. hybridus L. var. hypochondriacus (L.) Rob., A. hybridus var. quitensis (Kunth) Covas, A. hypochondriacus L. var. hypochondriacus, A. quitensis Kunth, A. quitensis var. stuckertianus Thell.

Herb. Introduced.
Departmental distribution: Alto Paraguay, Boquerón, Central, Guairá, Itapúa, Ñeembucú, Presidente Hayes, San Pedro.
Voucher: F. Mereles & S. Soria 9946 (FCQ).

*Amaranthus muricatus* (Moq.) Hieron., Pl. Diaph. Fl. Argent. 227. 1882.

Syn.: Euxolus muricatus Moq.

Herb.
Departmental distribution: Alto Paraguay, Boquerón, Presidente Hayes, San Pedro.
Voucher: J. De Egea et al. 1243 (BM, FCQ).
**Amaranthus standleyanus** Parodi ex Covas, Darwiniana 5: 339. 1941.

Syn.: *Amaranthus parodii* Standl., hom. illeg., *A. vulgatissimus* sensu Thell. non Speg.

Herb.
Departmental distribution: Alto Paraguay, Boquerón, Misiones, Presidente Hayes.
Voucher: *F. Mereles et al.* 10174 (BM, CTES, FCQ, G).

**Amaranthus viridis** L., Sp. Pl., ed. 2. 2: 1405. 1763.

Syn.: *Amaranthus gracilis* Desf., *Chenopodium caudatum* Jacq., *Euxolus caudatus* (Jacq.) Moq., *E. viridis* (L.) Moq.

Herb.
Departmental distribution: Alto Paraguay, Boquerón, Central, Concepción, Guairá, Paraguari, Presidente Hayes, San Pedro.
Voucher: *F. Mereles & S. Soria* 10186 (FCQ).

**Dysphania ambrosioides** (L.) Mosyakin & Clemants, Ukrayins’k. Bot. Zhurn. 59(4): 382. 2002.

Syn.: *Ambrina ambrosioides* (L.) Spach, *A. anthelmintica* Spach, *A. parvula* Phil., *Chenopodium ambrosioides* L., *Ch. ambrosioides* var. *dentata* Fenzl, *Ch. ambrosioides* f. *dentatum* (Fenzl) Aellen, *Ch. ambrosioides* ssp. *euambrosioides* Aellen, *Ch. ambrosioides* var. *genuinum* Willk., *Ch. ambrosioides* f. *genuinum* (Willk.) Aellen, *Ch. ambrosioides* var. *integrifolium* Fenzl, *Ch. ambrosioides* f. *integrifolium* (Fenzl) Aellen, *Ch. ambrosioides* var. *pinnatifidum* Willk., *Ch. ambrosioides* f. *pinnatifidum* (Willk.) Aellen, *Ch. ambrosioides* f. *rotundatum* Aellen, *Ch. ambrosioides* var. *suffruticosum* (Willd.) Asch. & Graebn., *Ch. ambrosioides* var. *typica* Speg., *Ch. ambrosioides* var. *typicum* (Speg.) Aellen, *Ch. suffruticosum* Willd., *Ch. suffruticosum* ssp. *remotum* Vorosh., *Teloxys ambrosioides* (L.) W.A.Weber, *A. incisa* Phil.

Herb.
Departmental distribution: Alto Paraguay, Amambay, Caaguazú, Caazapá, Central, Concepción, Cordillera, Guairá, Itapúa, Paraguari, Presidente Hayes.
Voucher: *R. Degen 120* (FCQ).
**Gomphrena celosioides** Mart. f. *aureiflora* (Chodat) Pedersen, Darwiniana 20: 272. 1976.

Syn.: *Gomphrena celosioides* var. *aureiflora* Stuchlik, *G. celosioides* f. *grandifolia* Stuchlik, *G. celosioides* f. *parvifolia* Stuchlik, *G. decumbens* Jacq. f. *aureiflora* Chodat, *G. decumbens* var. *aureiflora* (Chodat) Stuchlik, *G. hygrophila* Mart. f. *luteiflora* Herzog.

Herb.
Departmental distribution: Guairá, Ñeembucú, Paraguarí, Presidente Hayes.
Voucher: *J. De Egea et al. 1316* (BM, FCQ).

**Gomphrena celosioides** Mart. var. *celosioides*, Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur. 13: 301. 1826.

Syn.: *Gomphrena decumbens* Jacq. f. *albiflora* Chodat & Hassl., *G. decumbens* var. *albiflora* (Chodat & Hassl.) Stuchlik, *G. decumbens* var. *genuina* Stuchlik, nom. inval., *G. perennis* L. f. *ramossima* Stuchlik, *Xeraea celosioides* (Mart.) Kuntze

Herb.
Departmental distribution: Alto Paraguay, Alto Paraná, Boquerón, Caaguazú, Caazapá, Central, Cordillera, Guairá, Itapúa, Ñeembucú, Presidente Hayes, San Pedro.
Voucher: *F. Mereles et al. 9913* (FCQ).

**Gomphrena elegans** Mart. var. *elegans*, Nov. Gen. Sp. Pl. 2(1): 17, t. 119. 1826.

Syn.: *Gomphrena elegans* Mart. var. *genuina* Stuchlik, nom. inval., *G. elegans* f. *nigrovirida* Stuchlik, *G. hilariana* Moq., *G. viridifolia* Suess., *Xeraea elegans* (Mart.) Kuntze, *X. hilariana* (Moq.) Kuntze

Herb.
Departmental distribution: Canindeyú, Cordillera, Guairá, Paraguarí.
Voucher: *E. Zardini & R. Velázquez 11556* (FCQ).

**Gomphrena perennis** L. var. *perennis*, Sp. Pl. 1: 224. 1753.

Syn.: *Gomphrena perennis* L. ssp. *genuina* Stuchlik, nom. inval., *G. perennis* f. *parvifolia*, *G. perennis* f. *villosa*, *G. villosa* Mart., *Xeraea perennis* (L.) Kuntze, *X. villosa* (Mart.) Kuntze

Herb.
Departmental distribution: Alto Paraguay, Boquerón.
Voucher: *F. Mereles & S. Soria 9940* (BM, CTES, FCQ, G).
APIACEAE

*Cyclospermum leptophyllum* (Pers.) Sprague var. *leptophyllum*, J. Bot. 61: 131. 1923.

Syn.: *Apium ammi* Urb., *A. ammi* f. *filamentosum* (Kuntze) H.Wolff, *A. ammi* var. *filamentosum* Kuntze, *A. ammi* Urb. var. *genuinum* H.Wolff, *A. ammi* var. *leptophyllum* (Pers.) Kuntze, *A. ammi* f. *nanum* Kuntze, *A. ammi* f. *pedunculata* Chodat.

*A. laciniatum* (DC.) Urb. f. *elatius* (Hook. & Arn.) H.Wolff, *A. leptophyllum* (Pers.) F.Muell. ex Benth., *A. ranunculifolium* auct. non Kunth, *A. ranunculifolium* (DC.) Reiche, comb. illeg., *Helosciadium laciniatum* DC. var. *elatius* Hook. & Arn., *H. leptophyllum* (Pers.) DC., *H. ranunculifolium* DC., *Pimpinella leptophylla* Pers.

Herb.

Departmental distribution: Alto Paraguay, Alto Paraná, Boquerón, Caazapá, Central, Guairá, Ñeembucú, Presidente Hayes, San Pedro.

Voucher: *J. De Egea et al.* 1321 (FCQ).

APOCYNACEAE

*Asclepias curassavica* L., Sp. Pl. 1: 215. 1753.

Herb. Introduced.

Departmental distribution: Amambay, Canindeyú, Central, Cordillera, Guairá, Itapúa, Misiones, Paraguarí, Presidente Hayes.

Voucher: *F. Mereles et al.* 10011 (BM, FCQ, G).

*Asclepias mellodora* A.St.-Hil., Pl. Rem. Bres. 227. 1824.

Syn.: *Asclepias campestris* Decne., *A. campestris* var. *angustifolia* Kuntze, *A. campestris* var. *schlechteri* Kuntze, *A. curupi* E.Fourn., *A. jangadensis* S.Moore, *A. marginata* Decne. var. *bodenbenderi* Kuntze, *A. mellodora* var. *bodenbenderi* (Kuntze) Bollwinkel, *A. mellodora* var. *minor* A.St.-Hil., *A. mellodora* var. *multinervis* (E.Fourn.) Bollwinkel, *A. multinervis* E.Fourn., *A. nervosa* Decne., *A. papillosa* Silveira, *A. umbellata* Vell.

Herb.

Departmental distribution: Amambay, Boquerón, Caazapá, Canindeyú, Central, Concepción, Cordillera, Guairá, Itapúa, Misiones, Ñeembucú, Paraguarí, Presidente Hayes, San Pedro.

Voucher: *J. De Egea et al.* 1329 (FCQ).
**Calotropis procera** (Aiton) W.T. Aiton, Hort. Kew., ed. 2 2: 78. 1811.

Syn.: *Asclepias procera* Aiton

Shrub or small tree. Introduced.
Departmental distribution: Alto Paraguay, Boquerón.
Voucher: *F. Mereles & S. Soria 9983* (FCQ, G).

**ARALIACEAE**

*Hydrocotyle bowlesioides* Mathias & Constance, Bull. Torrey Bot. Club 69: 151. 1942.

Herb.
Departmental distribution: Alto Paraná, Amambay, Caazapá, Central, Guairá, Paraguari.
Voucher: *F. Mereles et al. 10098* (FCQ).

**ASTERACEAE**

*Acanthospermum hispidum* DC., Prodr. 5: 522. 1836.

Syn.: *Acanthospermum humile* DC. var. *hispidum* (DC.) Kuntze

Herb.
Departmental distribution: Alto Paraguay, Boquerón, Central, Concepción, Cordillera, Ñeembucú, Paraguari, Presidente Hayes.
Voucher: *A. Quarti P050* (FCQ).

*Ageratum conyzoides* L., Sp. Pl. 2: 839. 1753.

Syn.: *Ageratum conyzoides* L. var. *hirtum* (Lam.) DC., *A hirsutum* Poir., *A. hirtum* Lam., *A. latifolium* Cav., *Carelia conyzoides* (L.) Kuntze

Herb.
Departmental distribution: Amambay, Caazapá, Canindeyú, Central, Cordillera, Guairá, Itapúa, San Pedro.
Voucher: *J. De Egea et al. 1276* (FCQ).
Ambrosia elatior L., Sp. Pl. 2: 987. 1753.

Syn.: Ambrosia artemisiifolia L., A. artemisiifolia var. elatior (L.) Descourt., A. chilensis Hook. & Arn., A. peruviana Cabrera, hom. illeg.

Herb.
Departmental distribution: Alto Paraná, Amambay, Boquerón, Caazapá, Central, Concepción, Cordillera, Guairá, Presidente Hayes, San Pedro.
Voucher: F. Mereles et al. 10090 (FCQ, G).

Ambrosia tenuifolia Spreng., Syst. Veg. (ed. 16) 3: 851. 1826.

Herb.
Departmental distribution: Central, Paraguarí, Presidente Hayes.
Voucher: F. Mereles 5263 (CTES, FCQ).

Aspilia montevidensis (Spreng.) Kuntze var. montevidensis, Revis. Gen. Pl. 3[3]: 129. 1898.

Syn.: Aspilia arillata (DC.) Griseb., A. buphthalmiflora (DC.) Griseb., A. calendulacea (DC.) Griseb., A. montevidensis (Spreng.) Kuntze var. setosa (Griseb.) Cabrera, A. setosa Griseb., Leighia arillata DC., L. buphthalmiflora DC., L. calendulacea DC., Verbesina montevidensis Spreng., Wedelia montevidensis (Spreng.) B.L.Turner

Herb.
Departmental distribution: Amambay, Caaguazú, Caazapá, Canindeyú, Central, Concepción, Cordillera, Guairá, Itapúa, Misiones, Paraguarí, Presidente Hayes, San Pedro.
Voucher: J. De Egea et al. 1334 (BM, CTES, FCQ, G).

Aspilia silphioides Benth. & Hook. f., Gen. Pl. 2(1): 372. 1873.

Syn.: Gymnopsis helianthoides DC., Leighia silphioides Hook. & Arn., Wedelia silphioides (Hook. & Arn.) B.L.Turner

Herb.
Departmental distribution: Amambay, Boquerón, Central, Concepción, Cordillera, Ñeembucú, Presidente Hayes.
Voucher: F. Mereles & S. Soria 9953 (BM, FCQ, G).
**Baccharis salicifolia** (Ruiz & Pav.) Pers., Syn. Pl. 2: 425. 1807.

Syn.: *Baccharis alamanii* DC., *B. araucana* Phil., *B. pallida* Heering ex Reiche, *B. chilquilla* DC., nom. superfl., *B. coerulescens* DC., *B. confertifolia* Colla var. *confertifolia*, *B. cuervii* Phil., *B. fevillei* DC., *B. glutinosa* Pers. var. *incisa* Heering, *B. huydobriana* J.Rémy, *B. resinoides* Kunth, *B. kraussei* Heering ex Reiche, *B. lanceolata* Kunth emend. Heering, *B. linifolia* DC., hom. illeg., *B. longifolia* DC., *B. longipes* Kunze ex DC., *B. marginalis* DC., *B. marginalis* var. *arucana* (Phil.) Heering, *B. marginalis* var. *linifolia* (Phil.) Heering, *B. marginalis* var. *longipes* (Kunze ex DC.) Heering, *B. parviflora* (Ruiz & Pav.) Pers., *B. purpurascens* Heering, *P. salicifolia* (Ruiz & Pav.) F.H.Hellwig, *B. salicifolia* (Ruiz & Pav.) Pers. var. *longifolia* (DC.) Cuatrec., *B. sphaerocephala* Hook. & Arn. var. *krausei* (Heering) Malag., comb. illeg., *B. viscosa* (Ruiz & Pav.) Kuntze var. *nigricans* Kuntze, *Molina parviflora* Ruiz & Pav., *M. salicifolia* Ruiz & Pav., *M. striata* Ruiz & Pav., *Pingraea marginalis* (DC.) F.H.Hellwig

Shrub.
Departmental distribution: Alto Paraguay, Boquerón, Central, Itapúa, Presidente Hayes.
Voucher: *F. Mereles et al. 9917* (BM, FCQ, G).

**Bidens pilosa** L. var. *pilosa*, Sp. Pl. 2: 832. 1753.

Syn.: *Bidens californica* DC., *B. hispida* Kunth, *B. hirsuta* Nutt., hom. illeg., *B. leucantha* Willd. f. *discoidea* Sch.Bip., *B. leucantha* var. *pilosa* (L.) Griseb., *B. leucantha* var. *sundaica* (Blume) Hassk., *B. montaubanii* Phil., *B. pilosa* L. var. *brevifoliata* Hieron, *B. pilosa* var. *discoidea* Sch.Bip., *B. pilosa* var. *dubia* (Cass.) O.E.Schulz, *B. pilosa* var. *minor* (Blume) Sherff, *B. reflexa* Link, *B. sundaica* Blume, *B. sundaica* var. *minor* Blume, *Kerneria dubia* Cass.

Herb.
Departmental distribution: Alto Paraguay, Alto Paraná, Amambay, Caaguazú, Canindeyú, Central, Cordillera, Guairá, Itapúa, Misiones, Paraguari, Presidente Hayes, San Pedro.
Voucher: *J. De Egea et al. 1236* (FCQ).

**Bidens subalternans** DC. var. *subalternans*, Prodr. 5: 600. 1836.

Syn.: *Bidens quadrangularis* DC., *B. platensis* Manganaro

Herb.
Departmental distribution: Alto Paraguay, Amambay, Caaguazú, Caazapá, Central, Cordillera, Guairá, Paraguari.
Voucher: *N. Soria 5736* (FCQ, MO).
**Chrysolaena cognata** (Less.) Dematteis, Bol. Soc. Argent. Bot. 44(1-2): 157. 2009.

Syn.: *Cacalia cognata* (Less.) Kuntze, *Vernonia cinerascens* Sch.Bip. ex Baker, nom. nud., *V. cognata* Less., *V. senecionea* Mart. ex DC., *V. senecionea* var. *adenocarpa* DC., *V. senecionea* f. *calvata* Chodat

Herb.
Departmental distribution: Alto Paraná, Amambay, Caaguazú, Canindeyú, Central, Concepción, Cordillera, Guairá, Itapúa, Misiones, Paraguarí, San Pedro.
Voucher: *M. Dematteis et al. 3138* (CTES, FCQ).

**Chrysolaena platensis** (Spreng.) H.Rob., Proc. Biol. Soc. Washington 101: 957. 1988.

Syn.: *Cacalia platensis* (Spreng.) Kuntze, *Conyza platensis* Spreng., *Vernonia platensis* (Spreng.) Less., *V. virens* Sch.Bip. ex Baker f. *robustior* Chodat

Subshrub.
Departmental distribution: Amambay, Concepción, Cordillera, Guairá, Misiones, Paraguarí, San Pedro.
Voucher: *J. De Egea et al. 1335* (BM, CTES, FCQ, G).

**Conyza bonariensis** (L.) Cronquist var. *angustifolia* (Cabrera) Cabrera, Man. Fl. Alrededores Buenos Aires 481. 1953.

Syn.: *Conyza linearis* DC., *Erigeron bonariensis* L. var. *angustifolius* Cabrera

Herb.
Departmental distribution: Central, Misiones.
Voucher: *F. Mereles et al. 10176* (FCQ).

**Conyza bonariensis** (L.) Cronquist var. *bonariensis*, Bull. Torrey Bot. Club 70: 632. 1943.

Syn.: *Conyza hispida* Kunth, *C. plebeja* Phil., *Erigeron bonariensis* L., *E. bonariensis* f. *grisea* Chodat & Hassl., *Marsea bonariensis* (L.) V.M.Badillo

Herb.
Departmental distribution: Alto Paraguay, Amambay, Caaguazú, Caazapá, Central, Cordillera, Guairá, Paraguarí, Presidente Hayes.
Voucher: *F. Mereles 6450* (FCQ).
**Conyza sumatrensis** (Retz.) E.Walker var. *leiotheca* (S.F.Blake) Pruski & G.Sancho, Novon 16(1): 98–99, f. 1. 2006.

Syn.: *Conyza bilbaoana* J.Remy, *C. bonariensis* (L.) Cronquist var. *leiotheca* (S.F.Blake) Cuatrec., *C. elata* Kunth & Bouché, *C. floribunda* Kunth, *C. floribunda* var. *laciniiata* Cabrera, *C. myriocephala* J.Remy, *C. sumatrensis* (Retz.) E.Walker var. *floribunda* (Kunth) J.B.Marshall, *Erigeron bilbaoanus* (J.Remy) Cabrera, *E. bonariensis* L. var. *floribundum* (Kunth) Cuatrec., *E. bonariensis* f. *glabrata* Speg., *E. bonariensis* var. *leiotheca* S.F.Blake, *E. floribundus* (Kunth) Sch.Bip., *Marsea bonariensis* (L.) V.M.Badillo var. *leiotheca* (S.F.Blake) V.M.Badillo

Herb.
Departmental distribution: Alto Paraná, Amambay, Caaguazú, Central, Guairá, Itapúa, Paraguarí.
Voucher: *N. Soria 2684* (FCQ, MO).

**Eclipta prostrata** (L.) L., Mant. Pl. Altera 286. 1771.

Syn.: *Eclipta alba* (L.) Hassk., *E. erecta* L., nom. illeg., *Galinsoga oblongifolia* (Hook.) DC., *Polygyne inconspicua* Phil., *Verbesina alba* L., *V. conyzoides* Trew, *V. prostrata* L., *Wiborgia oblongifolia* Hook.

Herb.
Departmental distribution: Alto Paraguay, Alto Paraná, Amambay, Boquerón, Canindeyú, Central, Concepción, Cordillera, Guairá, Misiones, Presidente Hayes, San Pedro.
Voucher: *F. Mereles & J. De Egea 10129* (FCQ).

**Emilia fosbergii** Nicolson, Phytologia 32(1): 34. 1975.

Syn.: *Emilia javanica* auct. non (Burm.) C.B.Rob., *E. sagittata* auct. non (Vahl) DC.

Herb. Introduced.
Departmental distribution: Alto Paraná, Amambay, Caaguazú, Canindeyú, Central, Cordillera, Guairá, Misiones, San Pedro.
Voucher: *F. Mereles & J. De Egea 10147* (FCQ).
**Erechtites valerianifolius** (Link ex Spreng.) DC. f. *valerianifolius*, Prodr. 6: 295. 1838.

Syn.: *Crassocephalum valerianifolium* (Link ex Spreng.) Less., *Erechtites gardneriana* Cabrera, *E. valerianifolius* (Wolf) DC., nom. inval., *Gynura rosea* Ridl., *Senecio valerianifolius* Wolf ex Link, nom. nud., *Senecio valerianifolius* Desf., hom. illeg., *Senecio valerianifolius* Gardner, hom. illeg., *Senecio valerianifolius* Link ex Spreng., *Sonchus erythropappus* Meyen & Walp. ex Walp.

Herb.
Departmental distribution: Alto Paraná, Amambay, Caaguazú, Caazapá, Canindeyú, Central, Cordillera, Guairá, Itapúa, Paraguarí, San Pedro.
Voucher: *J. De Egea et al. 1237* (FCQ).

**Eupatorium inulifolium** Kunth, Nov. Gen. Sp. 4(15): 85 (ed. fol.). 1818.

Shrub.
Departmental distribution: Alto Paraná, Amambay, Boquerón, Caaguazú, Caazapá, Canindeyú, Central, Concepción, Cordillera, Guairá, Itapúa, Paraguarí, Presidente Hayes, San Pedro.
Voucher: *F. Mereles 9930* (BM, FCQ, G).

**Flaveria bidentis** (L.) Kuntze, Revis. Gen. Pl. 3(3): 148. 1898.

Syn.: *Ethulia bidentis* L., *Eupatorium chilense* Molina, *Flaveria bidentis* (L.) B.L.Rob., comb. superfl., *F. bonariensis* DC., *F. capitata* Juss. ex Sm., *F. chilensis* (Molina) J.F.Gmel., *F. contrayerba* (Cav.) Pers., *Milleria chiloensis* Juss., nom. nud., *M. contrayerba* Cav., *Vermifuga corymbosa* Ruiz & Pav., nom. illeg.

Herb.
Departmental distribution: Alto Paraguay, Boquerón, Concepción, Presidente Hayes.
Voucher: *F. Mereles 5667* (CTES, FCQ).

**Galinsoga parviflora** Cav., Icon. 3(2): 41–42, pl. 281. 1796.

Syn.: *Adventina parviflora* Raf., *Galinsoga quinqueradiata* Ruiz & Pav., nom. superfl., *Wiborgia acmella* Roth, *W. parviflora* (Cav.) Kunth

Herb.
Departmental distribution: Amambay, Central, Guairá.
Voucher: *G. Céspedes 422* (FCQ).
Gamochaeta americana (Mill.) Wedd., Chlor. And. 1: 151. 1856.

Syn.: Gamochaeta americana var. alpina Wedd., Gamochaeta guatemalensis (Gand.) Cabrera, Gnaphalium americanum Mill., Gnaphalium consanguineum Gaudich., Gnaphalium guatemalense Gand., Gnaphalium purpureum L. var. americum (Mill.) Klatt.

Herb.
Departmental distribution: Alto Paraná, Amambay, Central, Cordillera, Presidente Hayes.
Voucher: G. Céspedes 432 (FCQ).

Gamochaeta calviceps (Fernald) Cabrera, Bol. Soc. Argent. Bot. 9: 368. 1961.

Syn.: Gnaphalium calviceps Fernald

Herb.
Departmental distribution: Alto Paraguay, Amambay, Caaguazú, Central, Concepción, Cordillera, Paraguari, San Pedro.
Voucher: J. De Egea et al. 1227 (BM, FCQ).

Gamochaeta coarctata (Willd.) Kerguélen, Lejeunia 120: 104. 1987.

Syn.: Gamochaeta spicata Cabrera, Gnaphalium coarctatum Willd., Gnaphalium purpureum L. var. spicatum Baker, nom. illeg., Gnaphalium spicatum Lam., nom. illeg.

Herb.
Departmental distribution: Alto Paraguay, Alto Paraná, Caazapá, Central, Cordillera, Guairá, Itapúa, San Pedro.
Voucher: J. De Egea et al. 1322 (FCQ).

Gamochaeta pensylvanica (Willd.) Cabrera, Bol. Soc. Argent. Bot. 9: 375. 1961.

Syn.: Gamochaeta platensis (Cabrera) Cabrera, Gnaphalium pensylvanicum Willd., Gnaphalium peregrinum Fernald, Gnaphalium platense Cabrera, Gnaphalium purpureum L. ssp. pensylvanica (Willd.) O.Bolòs & Vigo, Gnaphalium purpureum var. spathulatum Baker, Gnaphalium spathulatum Lam., hom. illeg.

Herb.
Departmental distribution: Alto Paraguay, Alto Paraná, Boquerón, Canindeyú, Central, Cordillera, Guairá, Paraguari, Presidente Hayes.
Voucher: I. Basualdo 395 (FCQ).
Lepidaploa remotiflora (Rich.) H.Rob., Proc. Biol. Soc. Washington 103: 491. 1990.

Syn.: Vernonia hirtiflora Sch.Bip. ex Baker, V. lithospermoïdes Baker, V. remotiflora Rich., V. remotiflora var. tricholepis (DC.) Baker, V. sessiflora Willd. ex Less., V. tricholepis DC.

Herb.
Departmental distribution: Alto Paraguay, Alto Paraná, Amambay, Caaguazú, Caazapá, Canindeyú, Central, Concepción, Cordillera, Guairá, Itapúa, Misiones, Ñeembucú, Paraguari, Presidente Hayes, San Pedro.
Voucher: J. De Egea et al. 1223 (BM, FCQ).

Parthenium hysterophorus L., Sp. Pl. 2: 988. 1753.

Syn.: Argyrochaeta bipinnatifida Cav., Echetrosis pentasperma Phil., Parthenium glomeratum Rollins, P. lobatum Buckley, P. pinnatifidum Stokes, nom. superfl., Villanova bipinnatifida Ortega

Herb.
Departmental distribution: Alto Paraguay, Amambay, Presidente Hayes.
Voucher: J. De Egea et al. 142 (BM, CTES, FCQ, G, MO).

Pluchea sagittalis (Lam.) Cabrera, Bol. Soc. Argent. Bot. 3: 36. 1949.

Syn.: Conyza sagittalis Lam., Epaltes brasiliensis DC., Gnaphalium suaveolens Vell., Pluchea quitoca DC., P. suaveolens (Vell.) Kuntze

Herb.
Departmental distribution: Alto Paraguay, Amambay, Boquerón, Caaguazú, Caazapá, Central, Concepción, Cordillera, Guairá, Paraguari, Presidente Hayes.
Voucher: F. Mereles et al. 10048 (FCQ, G).

Praxelis clematidea (Griseb.) R.M.King & H.Rob., Phytologia 20: 194. 1970.

Syn.: Eupatorium catarium Veldkamp, E. clematideum Griseb., hom. illeg., E. pauciflorum auct. non Kunth, E. urticifolium auct. non L., E. urticifolium L. f. var. clematideum Hieron. ex Kuntze, E. urticifolium f. var. nanum Hieron. ex Kuntze

Herb.
Departmental distribution: Alto Paraguay, Amambay, Boquerón, Caaguazú, Canindeyú, Central, Concepción, Cordillera, Guairá, Misiones, Ñeembucú, Paraguarí, Presidente Hayes, San Pedro.
Voucher: W.J. Hahn 1613 (MO, PY).

**Senecio brasiliensis** (Spreng.) Less var. *brasiliensis*, Linnaea 6: 249. 1831.

Syn.: *Cineraria brasiliensis* Spreng.

Herb.
Departmental distribution: Alto Paraná, Amambay, Caaguazú, Caazapá, Canindeyú, Itapúa, Misiones.
Voucher: N. Soria 2513 (CTES, MO).

**Senecio grisebachii** Baker var. *grisebachii*, Fl. Bras. 6(3): 313. 1884.

Herb.
Departmental distribution: Alto Paraguay, Amambay, Caaguazú, Caazapá, Canindeyú, Central, Cordillera, Guairá, Itapúa, Misiones, Ñeembucú, Paraguarí, Presidente Hayes, San Pedro.
Voucher: F. Mereles et al. 10005 (FCQ).

**Senecio hieronymi** Griseb., Abh. Königl. Ges. Wiss. Göttingen 24: 205. 1879.

Syn.: *Senecio charaguensis* Cuatrec., *S. tafiensis* Cabrera

Subshrub.
Departmental distribution: Alto Paraná, Canindeyú, Central, Guairá, Paraguarí.
Voucher: J. De Egea et al. 1331 (BM, FCQ).

**Solidago chilensis** Meyen var. *chilensis*, Reise Erde 1: 311. 1834.

Syn.: *Aster sagei* Phil., *Solidago coquimbana* Phil., *S. floribunda* Phil., *S. laxiflora* Phil., *S. linearifolia* DC., *S. linearifolia* var. *brachypoda* Speg., *S. microglossa* DC. var. *linearifolia* (DC.) Baker, *S. parviflora* Phil., *S. recta* Phil., *S. valdiviana* Phil.

Herb.
Departmental distribution: Alto Paraguay, Boquerón, Cordillera.
Voucher: I. Basualdo 111 (FCQ).
**Solidago microglossa** DC., Prodr. 5: 332. 1836.

Syn.: *Solidago chilensis* Meyen var. *megapotamica* (DC.) Cabrera, *S. microglossa* DC. var. *megapotamica* DC.

Herb.
Departmental distribution: Alto Paraguay, Alto Paraná, Amambay, Caaguazú, Caazapá, Central, Concepción, Cordillera, Guairá, Paraguarí, Presidente Hayes, San Pedro.
Voucher: *M. Ortíz 1004* (FCQ).

**Soliva sessilis** Ruiz & Pav., Syst. Veg. Fl. Peruv. Chil. 1: 215. 1798.

Syn.: *Gymnostyles alata* Spreng., *G. barclayana* (DC.) Steud., *G. chilensis* Spreng., *G. pterosperma* Juss., *Soliva alata* (Spreng.) DC., *S. barclayana* DC., *S. daucifolia* Nutt., *S. microloma* Phil., *S. neglecta* Cabrera, *S. pterosperma* (Juss.) Less., *S. sessilis* Ruiz & Pav. var. *barclayana* (DC.) Baker, *S. valdiviana* Phil.

Herb.
Departmental distribution: Alto Paraná, Concepción, Cordillera, Guairá, Misiones, Paraguarí, San Pedro.
Voucher: *L. Pérez 448* (FCQ).

**Sonchus oleraceus** L., Sp. Pl. 2: 794. 1753.

Syn.: *Sonchus gracilis* Phil., *S. rivularis* Phil.

Herb. Introduced.
Departmental distribution: Alto Paraguay, Alto Paraná, Boquerón, Caazapá, Canindeyú, Central, Guairá, San Pedro.
Voucher: *J. De Egea et al. 1238* (BM, FCQ).

**Synedrellopsis grisebachii** Hieron. & Kuntze, Revis. Gen. Pl. 3(3): 180. 1898.

Syn.: *Synedrella nodiflora* Griseb. ex Kuntze, nom. nud.

Herb.
Departmental distribution: Alto Paraguay, Amambay, Boquerón, Central, Itapúa, San Pedro.
Voucher: *J. De Egea & F. Mereles 1357* (BM, CTES, FCQ, G).
**Tagetes minuta** L., Sp. Pl. 2: 887. 1753.

Syn.: *Tagetes bonariensis* Pers., *T. glandulifera* Schrank, *T. glandulosa* Link, *T. porophyllum* Vell.

Herb.
Departmental distribution: Alto Paraguay, Amambay, Central, Cordillera, Paraguarí, Presidente Hayes.
Voucher: *A. Schinini 2401* (FCQ).

**Taraxacum officinale** F.H.Wigg., Prim. Fl. Holsat. 56. 1780.

Syn.: *Leontodon taraxacum* L., *L. vulgaris* Lam., nom. illeg., *Taraxacum dens-leonis* Desf., *T. subspathulatum* A.J.Richards, *T. vulgare* (Lam.) Schrank., nom. illeg.

Herb. Introduced.
Departmental distribution: Alto Paraná, Caazapá, Guairá.
Voucher: *R. Degen 982* (FCQ).

*Tridax procumbens* L., Sp. Pl. 2: 900. 1753.

Syn.: *Amellus pedunculatus* Ortega ex Willd., nom. inval., *Balbisia canescens* Pers., *B. divaricata* Cass., *B. elongata* Willd., *B. pedunculata* Ortega ex Hoffmans., nom. illeg., *Tridax procumbens* L. var. *canescens* (Pers.) DC., *T. procumbens* var. *ovatifolia* B.L.Rob. ex Greenm.

Herb.
Departmental distribution: Boquerón, Central, Concepción, San Pedro.
Voucher: *F. Mereles & S. Soria 9944* (BM, FCQ, G).

**Vernonanthura tweedieana** (Baker) H.Rob., Phytologia 73: 74. 1992.

Syn.: *Chrysocoma arborea* Vell., *Vernonia tweedieana* Baker

Shrub.
Departmental distribution: Alto Paraguay, Alto Paraná, Amambay, Caaguazú, Central, Cordillera, Guairá, Itapúa, Misiones, Paraguarí, Presidente Hayes, San Pedro.
Voucher: *F. Mereles et al. 9907* (FCQ, G).
**Vernonia incana** Less., Linnaea 4: 277. 1829.

Syn.: *Cacalia incana* (Less.) Kuntze, *Vernonia inmunis* Griseb.

Herb.
Departmental distribution: Alto Paraná, Amambay, Central, Ñeembucú, Paraguarí, Presidente Hayes.
Voucher: *M. Ortiz 551* (FCQ).

**BORAGINACEAE**

*Heliotropium leiocarpum* Morong, Ann. New York Acad. Sci. 7: 168. 1893.

Syn.: *Heliotropium leiocarpum* Morong f. *albiflora* Chodat, *H. leiocarpum* f. *minor* Chodat

Subshrub.
Departmental distribution: Alto Paraná, Central, Cordillera, Paraguarí, Presidente Hayes.
Voucher: *A. Krapovickas & C.L. Cristóbal 44544* (FCQ).

**BRASSICACEAE**

*Brassica rapa* L., Sp. Pl. 2: 666. 1753.

Syn.: *Brassica campestris* L.

Herb. Introduced.
Departmental distribution: Alto Paraguay, Boquerón, Central.
Voucher: *M. Ortiz 283* (FCQ).

*Capsella bursa-pastoris* (L.) Medik., Pfl.-Gatt. 85. 1792.

Syn.: *Thlaspi bursa-pastoris* L.

Herb. Introduced.
Departmental distribution: Itapúa.
Voucher: *E. Lurvey 181* (Lurvey 1983).
**Lepidium didymum** L., Syst. Nat., ed. 12. 2: 433. 1767.

Syn.: *Coronopus didymus* (L.) Sm., *C. didymus* var. *macrocarpus* Muschl., *C. didymus* var. *procumbens* Muschl., *C. leptocarpus* Boelcke, *C. leptocarpus* var. *microcarpus* Boelcke, *Lepicochlea americana* Rojas Acosta, *Senebiera didyma* (L.) Pers., *S. pinнатifica* DC.

Herb.
Departmental distribution: Alto Paraná, Amambay, Caazapá, Central, Cordillera.
Voucher: *I. Basualdo 5223* (FCQ).

**Lepidium virginicum** L., Sp. Pl. 2: 645. 1753.

Herb. Introduced.
Departmental distribution: Amambay, Caaguazú, Central, Guairá, Itapúa.
Voucher: *E. Lurvey 359* (Lurvey 1983).

**Raphanus raphanistrum** L., Sp. Pl. 2: 669. 1753.

Herb. Introduced.
Departmental distribution: Amambay, Cordillera, Itapúa.
Voucher: *E. Lurvey 374* (Lurvey 1983).

**Raphanus sativus** L., Sp. Pl. 2: 669. 1753.

Herb. Introduced.
Departmental distribution: Amambay, Central, Cordillera, Misiones, San Pedro.
Voucher: *J. De Egea et al. 1268* (FCQ).

**CAMPANULACEAE**

**Lobelia xalapensis** Kunth, Nov. Gen. Sp. 3: 315. 1819.

Syn.: *Dortmannia cliffortiana* Kunzze var. *xalapensis* (Kunth) Kunzze, *D. mollis* (Grah- ham) Kunzze, *D. monticola* (Kunth) Kunzze, *D. ocimoides* (Kunzze) Kunzze, *Lobelia cliffortiana* L., *L. cliffortiana* var. *xalapensis* (Kunth) A.Grey, *L. mollis* Graham, *L. monticola* Kunth, *L. ocimoides* Kunze, *L. palmaris* Willd. ex Roem. & Schult., *Rapuntium monticulum* (Kunth) C.Presl, *R. xalapense* (Kunth) C.Presl
Herb.
Departmental distribution: Alto Paraguay, Amambay, Boquerón, Caazapá, Canindeyú, Central, Concepción, Cordillera, Guairá, Paraguarí, San Pedro.
Voucher: J. De Egea et al. 1317 (BM, FCQ).

*Triodanis perfoliata* (L.) Nieuwl. subsp. *biflora* (Ruiz & Pav.) Lammers, Novon 16(1): 72. 2006.

Syn.: *Campanula biflora* Ruiz & Pav., *C. ludoviciana* Torr. ex A.Gray, nom. nud., *C. montevidensis* Spreng., *Dysmicodon californicum* Nutt., *D. ovatum* Nutt., *Legouzia biflora* (Ruiz & Pav.) Britton, *Pentagonia biflora* (Ruiz & Pav.) Kuntze, *Specularia biflora* (Ruiz & Pav.) Fisch. & A.Gray, *S. californica* (Nutt.) Vatke, *S. ovata* (Nutt.) Vatke, *S. perfoliata* (L.) A.DC., *S. perfoliata* f. *ramosa* Arechav., *S. perfoliata* f. *rigida* Arechav., *Triodanis biflora* (Ruiz & Pav.) Greene, *T. perfoliata* (L.) Nieuwl. var. *biflora* (Ruiz & Pav.) T.R.Bradley

Herb.
Departmental distribution: Alto Paraná, Central, Guairá, Paraguarí.
Voucher: J. De Egea et al. 1313 (FCQ).

*Wahlenbergia linarioides* (Lam.) A.DC., Monogr. Campan. 158. 1830.

Syn.: *Campanula arida* Kunth, *C. chilensis* Molina, *C. linarioides* Lam., *Wahlenbergia arida* (Kunth) Griseb., *W. linarioides* (Lam.) A.DC. var. *arida* (Kunth) A.DC., *W. linarioides* var. *micrantha* Phil.

Herb.
Departmental distribution: Alto Paraná, Amambay, Caaguazú, Caazapá, Canindeyú, Central, Guairá, Itapúa, Ñeembucú, Paraguarí.
Voucher: F. Mereles et al. 10088 (FCQ, G).

CARYOPHYLLACEAE

*Cerastium rivulariastrum* Möschl & Pedersen, Darwiniana 16(1-2): 118. 1970.

Herb.
Departmental distribution: Canindeyú, Central, Guairá, Misiones, Paraguarí.
Voucher: G. Céspedes 435 (FCQ).
Drymaria cordata (L.) Willd. ex Roem. & Schult., Syst. Veg. (ed. 15 bis) 5: 406. 1819.

Syn.: Drymaria cordata (L.) Willd. ex Roem. & Schult. var. pacifica Mizush., Holosteum cordatum L.

Herb.
Departmental distribution: Central, Cordillera, Guairá, Paraguarí.
Voucher: E. Zardini & R. Velázquez 27329 (FCQ, MO).

Paronychia communis Cambess. var. communis, Fl. Bras. Merid. (quarto ed.) 2(15): 186. 1829.

Herb.
Departmental distribution: Alto Paraná, Canindeyú, Cordillera, Paraguarí.
Voucher: F. Mereles et al. 10073 (FCQ, G).

Stellaria media (L.) Cirillo var. gymnocalyx Trautv., Acta Horti Petrop. 1: 33. 1881.

Syn.: Stellaria glabra Raunk.

Herb. Introduced.
Departmental distribution: Itapúa.
Voucher: E. Lurvey 205 (CTES).

CLEOMACEAE

Cleome aculeata L. var. aculeata, Syst. Nat., ed. 12. 3: 232. 1768.

Herb.
Departmental distribution: Alto Paraguay, Central, Concepción, Cordillera, Guairá, Itapúa, Paraguarí, Presidente Hayes.
Voucher: M. Ortíz 317 (FCQ).

Cleome tucumanensis Iltis, Brittonia 12: 284. 1960.

Syn.: Cleome flexuosa Griseb., nom. illeg.

Herb.
Departmental distribution: Alto Paraguay, Boquerón, Central, Presidente Hayes.
Voucher: F. Mereles & S. Soria 9941 (FCQ, G).
**COMMELINACEAE**

*Commelina benghalensis* L., Sp. Pl. 1: 41. 1753.

Herb. Introduced.
Departmental distribution: Cordillera, Guairá, Paraguarí, San Pedro.
Voucher: *J. De Egea et al. 1273* (FCQ).

**Commelina diffusa** Burm.f. var. *diffusa*, Fl. Indica 18, pl. 7, f. 2. 1768.

Syn.: *Commelina cayennensis* Rich., *C. cayennensis* var. *pubescens* Griseb., *C. longicaulis* Jacq., *C. nudiflora* auct. non L.

Herb.
Departmental distribution: Concepción, Guairá, Misiones, Ñeembucú, Paraguarí.
Voucher: *F. Mereles & J. De Egea 10149* (FCQ, G).

**Commelina diffusa** Burm.f. var. *gigas* (Small) Faden, Ann. Missouri Bot. Gard. 80: 213. 1993.

Syn.: *Commelina gigas* Small

Herb.
Departmental distribution: Boquerón, Central, Cordillera, Guairá, Itapúa, Paraguarí.
Voucher: *F. Mereles et al. 9919* (FCQ, G).

**Commelina erecta** L. var. *angustifolia* (Michx.) Fernald, Rhodora 42: 439. 1940.

Syn.: *Commelina angustifolia* Michx., *C. virginica* L. var. *angustifolia* (Michx.) C.B.Clarke

Herb.
Departmental distribution: Boquerón, Cordillera.
Voucher: *F. Mereles & S. Soria 9964* (FCQ, G).

**Commelina erecta** L. var. *erecta*, Sp. Pl. 1: 41. 1753.

Syn.: *Commelina elegans* Kunth, *C. poblana* Seub., *C. sulcata* Willd., *C. virginica* auct. non L., *C. virginica* L. var. *australis* C.B.Clarke
Herb.
Departmental distribution: Alto Paraguay, Amambay, Canindeyú, Central, Ñeembucú, Paraguari, Presidente Hayes, San Pedro.
Voucher: F. Mereles 9936 (BM, FCQ, G).

*Commelina platyphylla* Klotzsch, Reis. Br.-Guiana 3: 897. 1849.

Syn.: *Commelina balansae* (C.B.Clarke) Herter, *C. platyphylla* var. *balansae* C.B.Clarke

Herb.
Departmental distribution: Boquerón, Caaguazú, Central, Concepción, Cordillera, Itapúa, Misiones, Ñeembucú, Paraguari, Presidente Hayes.
Voucher: F. Mereles & J. De Egea 10127 (FCQ).

**CONVOLVULACEAE**

*Ipomoea cordatotriloba* Dennst. var. *australis* (O’Donell) D.F.Austin, Taxon 37(1): 185. 1988.

Syn.: *Ipomoea trichocarpa* Elliot, nom. illeg., *I. trichocarpa* Elliott var. *australis* O’Donell, *Ipomoea grandifolia* (Dammer) O’Donell, Arq. Mus. Paraense 9: 222. 1952.

Vine.
Departmental distribution: Amambay, Caaguazú, Central, Cordillera, Guairá, Paraguari, San Pedro.
Voucher: E. Zardini 9984 (FCQ, MO).

*Ipomoea nil* (L.) Roth, Catal. Bot. 1: 36. 1797.

Syn.: *Convolvulus nil* L., *C. tomentosus* Vell., *Ipomoea cuspidata* Ruiz & Pav., *I. longicuspis* Meisn., nom. illeg., *I. scabra* Forssk., *Pharbitis cuspidata* (Ruiz & Pav.) G.Don
Vine.
Departmental distribution: Boquerón, Caazapá, Canindeyú, Central, Cordillera, Guairá, Itapúa, Paraguari, Presidente Hayes, San Pedro.
Voucher: J. De Egea et al. 1318 (BM, FCQ, G).

CUCURBITACEAE

*Cucurbitella asperata* (Gillies ex Hook. & Arn.) Walp., Repert. Bot. Syst. 6: 50. 1846.

Syn.: *Cucurbita asperata* Gillies ex Hook. & Arn., *Cucurbita urkupinana* Cárdenas, *Cucurbitella cucumifolia* (Griseb.) Cogn., *Cucurbitella duriaeii* (Naudin) Cogn., *Cucurbitella integrifolia* Cogn., *Cucurbitella integrifolia* Cogn. var. *glabrior* Cogn., *Cucurbitella urkupinana* (Cárdenas) C.Jeffrey, *Prasopepon cucumifolius* Griseb., *P. durieuui* Naudin, *Schizostigma asperatum* (Gillies ex Hook. & Arn.) Arn., comb. illeg.

Vine.
Departmental distribution: Alto Paraguay, Boquerón, Central, Concepción, Paraguari, Presidente Hayes, San Pedro.
Voucher: J. De Egea et al. 1226 (BM, FCQ).

CYPERACEAE

*Bulbostylis capillaris* (L.) Kunth ex C.B.Clarke var. *capillaris*, Fl. Brit. India 6(19): 652. 1893.

Syn.: *Abildgaardia capillaris* (L.) Lye, *Fimbristylis capillaris* (L.) A.Gray, *Isolepis capillaris* (L.) Roem. & Schult., *Scirpus capillaris* L., *Stenophyllus capillaris* (L.) Britton Herb.

Departmental distribution: Alto Paraguay, Caaguazú, Caazapá, Guairá, Paraguari.
Voucher: J. De Egea et al. 1327 (FCQ).

*Cyperus aggregatus* Endl., Cat. Horti Vindob. 1: 93. 1842.

Syn.: *Cyperus aggregatus* (Willd.) Endl. var. *gigas* (Lindm.) Guagl., *C. argentinus* Boeck., *C. cayennensis* (Lam.) Britton, nom. illeg., *C. cayennensis* var. *gigas* (Lindm.) Barros, *C. cayennensis* var. *umbellato-flavus* (C.B.Clarke) Barros, *C. flavomariscus* Griseb., *C. flavus* (Vahl) Nees, nom. illeg., *C. flavus* var. *aggregatus* (Willd.) Kük., *C. flavus* var. *angustatus* Kük., *C. flavus* var. *argentinus* (Boeck.) Kük. ex Osten, *C. flavus* var. *gigas* (Lindm.) Kük., *C. retrorsus* Chapm. var. *australis* (Lindm.) Kük.,
Didymia cyperomorpha Phil., Kyllinga cayennensis Lam., Mariscus aggregatus Willd., M. cayennensis (Lam.) Urb., M. cylindricus Elliot var. australis Lindm., M. flavus Vahl, M. flavus var. gigas Lindm., C. flavus var. laevis (Kunth) Kük., M. flavus f. umbellato-flava C.B.Clarke

Herb.
Departmental distribution: Alto Paraguay, Alto Paraná, Amambay, Canindeyú, Central, Cordillera, Guairá, Itapúa, Misiones, Ñeembucú, Paraguari, Presidente Hayes, San Pedro.
Voucher: J. De Egea et al. 1289 (BM, FCQ).

\textbf{Cyperus eragrostis} Lam. var. eragrostis, Tabl. Encycl. i. 196. 1791.

Syn.: Cyperus compressus Jacq., C. declinatus Moench, C. eragrostis Lam. f. latifrons Kük., C. eragrostis f. tener Kük., C. monandrus Roth, C. vegetus Willd., C. vegetus var. obtusangulus Kuntze

Herb.
Departmental distribution: Guairá.
Voucher: F. Mereles & S. Soria 9949 (FCQ, G).

\textbf{Cyperus esculentus} L. var. leptostachyus Boeck., Linnaea 36: 290. 1870.

Syn.: Chlorocyperus phymatodes (Muhl.) Palla, Cyperus esculentus L. var. phymatodes (Muhl.) Kük., Cyperus phymatodes Muhl.

Herb. Introduced.
Departmental distribution: Alto Paraguay, Alto Paraná, Central, Cordillera, Itapúa.
Voucher: J. De Egea et al. 325 (BM, MO).

\textbf{Cyperus haspan} L. var. haspan, Sp. Pl. 1: 45. 1753.

Syn.: Cyperus adenophorus Schrad., C. americanus (Boeck.) Palla, C. autumnalis (Rottb.) Vahl, C. cayennensis Willd. ex Link, C. efoliatus Boeck., C. haspan L. var. adenophorus (Schrad.) Kük., C. haspan var. americanus Boeck., Cyperus haspan ssp. juncoides (Lam.) Kük., C. haspan var. riparius (Schrad. ex Nees) Kük., C. juncoides Lam., C. riparius Schrad. ex Nees, Scirpus autumnalis Rottb., hom. illeg.

Herb.
Departmental distribution: Alto Paraguay, Caaguazú, Caazapá, Canindeyú, Central, Cordillera, Guairá, Itapúa, Misiones, Neembucú, Paraguarí.

Voucher: F. Mereles & S. Soria 10201 (FCQ).

**Cyperus odoratus** L., Sp. Pl. 1: 46. 1753.

Syn.: *Cyperus acicularis* (Nees) Steud., *C. cephalophorus* J.Presl & C.Presl, *C. conglobatus* Link, *C. densiflorus* G.Mey., *C. engelmannii* Steud., *C. ferax* Rich., *C. ferax* var. *acicularis* (Nees) Kük., *C. ferax* var. *bulbiferus* Barros, *C. ferax* var. *conglobatus* (Link) Kük., *C. ferax* ssp. *engelmannii* (Steud.) Kük., *C. ferax* var. *maximilianii* (Schrad. ex Nees) Boeck., *C. ferax* ssp. *speciosus* (Vahl) Kük., *C. ferox* Vahl, *C. flexuosus* Vahl, *C. hamiltonii* Kunth, *C. huarmensis* (Kunth) M.C.Johnst., *C. jubaeflorus* Rudge, *C. maximilianii* (Schrad. ex Nees) Griseb., *C. pohlianus* (Nees) Kuntze, *C. speciosus* Vahl, *Dictidium lenticulare* Schrad. ex Nees, *D. lomentaceum* Nees, *D. maximilianii* Schrad. ex Nees, *D. odoratum* Schrad. ex Nees, *D. uliginosum* Schrad. ex Nees, *Mariscus ferax* (Rich.) C.B.Clarke, *M. pohlianus* Nees, *Torulinium confertum* Desv. ex Ham., *T. ferax* (Rich.) Urb., *T. odoratum* (L.) S.S.Hooper

Herb.

Departmental distribution: Alto Paraguay, Alto Paraná, Amambay, Boquerón, Caaguazú, Caazapá, Central, Concepción, Cordillera, Guairá, Itapúa, Misiones, Neembucú, Paraguarí, Presidente Hayes, San Pedro.

Voucher: F. Mereles & S. Soria 9965 (FCQ, G).

**Cyperus rotundus** L., Sp. Pl. 1: 45. 1753.

Syn.: *Chlorocyperus rotundus* (L.) Palla

Herb.

Departmental distribution: Caazapá, Cordillera, Itapúa.

Voucher: F. Mereles *et al.* 9920 (FCQ).

**Cyperus tenuis** Sw., Prodr. 20. 1788.

Syn.: *Cyperus caracasanus* Kunth

Herb.

Departmental distribution: Caaguazú, Misiones, Paraguarí.

Voucher: F. Mereles & J. De Egea 10136 (FCQ).
**Eleocharis montana** (Kunth) Roem. & Schult., Syst. Veg. 2: 153. 1817.

Syn.: *Eleocharis consanguinea* Kunth, *Eleocharis montana* var. *nodulosa* (Roth) Svenson, *Eleocharis nodulosa* (Roth) Schult., *Eleocharis nodulosa* f. *trigyna* Barros, *Eleogenus nodulosus* (Roth) Nees, *Scirpus montanus* Kunth, *S. nodulosus* Roth

Herb aquatic.
Departmental distribution: Alto Paraguay, Alto Paraná, Amambay, Caaguazú, Caa-zapá, Canindeyú, Central, Concepción, Cordillera, Guairá, Itapúa, Misiones, Ñe-embucú, Paraguarí, Presidente Hayes, San Pedro.
Voucher: *G. Céspedes & al 443* (BM, FCQ).

**Rhynchospora corymbosa** (L.) Britton var. *corymbosa*, Trans. New York Acad. Sci. 11: 84. 1892.

Syn.: *Calyptrostylis fascicularis* Nees, *C. florida* (Rudge) Nees, *Dichromena corymbosa* (L.) J.F.Macbr., *Rhynchospora aurea* Vahl, *R. corymbosa* (L.) Britton var. *florida* (Rudge) Kük., *R. florida* (Rudge) Schult., *R. surinamensis* (Rotth.) Nees, *Schoenus floridus* Rudge, *Schoenus surinamensis* Rotth., *Scirpus corymbosus* L.

Herb.
Departmental distribution: Alto Paraguay, Amambay, Caaguazú, Canindeyú, Central, Concepción, Cordillera, Guairá, Itapúa, Misiones, Ñeembucú, Paraguarí, Presidente Hayes, San Pedro.
Voucher: *G. Céspedes et al. 444* (FCQ).

**EUPHORBIACEAE**

**Acalypha communis** Müller Arg., Linnaea 34: 23. 1865.

Syn.: *Acalypha agrestis* Morong ex Britton, *A. apicalis* N.E.Br., *A. communis* Müller Arg. var. *agrestis* (Morong ex Britton) Chodat, *A. communis* f. *grandifolia* Chodat & Hassl., *A. communis* var. *guaranitica* Chodat & Hassl., *A. communis* var. *hirta* (Spreng.) Müller Arg., comb. illeg., *A. communis* var. *salticifolia* Pax & K.Hoffm., *A. communis* var. *saltensis* Pax & K.Hoffm., *A. communis* var. *tomentella* Müller Arg., *A. communis* var. *tomentosa* Müller Arg., *A. cordobensis* Müller Arg., *A. cordobensis* var. *rotundata* Griseb., *A. gracilis* Griseb., hom. illeg., *A. hirta* Spreng., hom. illeg., *A. montevidensis* Klotzsch ex Pax & K.Hoffm., nom. nud., *A. paraguariensis* Chodat & Hassl., *A. variabilis* Klotzsch ex Baill. var. *angustifolia* Baill., *Ricinocarpus cordobensis* (Müller Arg.) Kunz.
Herb or subshrub.
Departmental distribution: Alto Paraguay, Alto Paraná, Amambay, Boquerón, Caazapá, Canindeyú, Central, Concepción, Cordillera, Guairá, Itapúa, Ñeembucú, Paraguarí, Presidente Hayes, San Pedro.
Voucher: F. Mereles 9929 (BM, CTES, FCQ, G).

**Cnidoscolus albomaculatus** (Pax) I.M.Johnst., Contr. Gray Herb. 68: 86. 1923.

Syn.: *Jatropha albomaculata* Pax, *J. albomaculata* var. *nana* (Chodat & Hassl.) Pax, *J. albomaculata* var. *stimulosissima* (Chodat & Hassl.) Pax, *J. albomaculata* var. *subcuneata* Pax, *J. vitifolia* Mill. f. *nana* Chodat & Hassl., *J. vitifolia* f. *stimulosissima* Chodat & Hassl.

Herb or shrub.
Departmental distribution: Alto Paraguay, Amambay, Boquerón, Caazapá, Canindeyú, Central, Concepción, Cordillera, Guairá, Itapúa, Ñeembucú, Paraguarí, Presidente Hayes, San Pedro.
Voucher: F. Mereles & S. Soria 10181 (FCQ).

**Croton glandulosus** L., Syst. Nat., ed. 10. 2: 1275. 1759.

Syn.: *Croton divaricatus* Sw., *C. glandulosus* L. var. *scordioides* (Lam.) Müll.Arg., *C. scordioides* Lam.

Herb.
Departmental distribution: Alto Paraná, Amambay, Boquerón, Caazapá, Canindeyú, Central, Concepción, Cordillera, Guairá, Itapúa, Paraguarí.
Voucher: J. De Egea et al. 1372 (FCQ).

**Euphorbia heterophylla** L., Sp. Pl. 1: 453. 1753.

Syn.: *Poinsettia heterophylla* (L.) Klotzsch & Garcke

Herb.
Departmental distribution: Alto Paraná, Amambay, Caazapá, Canindeyú, Central, Concepción, Cordillera, Guairá, Itapúa, Paraguarí.
Voucher: F. Mereles et al. 9921 (BM, FCQ, G).
**Euphorbia birta** L. var. *birta*, Sp. Pl. 1: 454. 1753.

Syn.: *Chamaesyce birta* (L.) Millsp., *Euphorbia pilulifera* auct. non L., *E. pilulifera* L. var. *guaranitica* Chodat & Hassl.

Herb. Introduced.
Departmental distribution: Alto Paraguay, Alto Paraná, Central, Itapúa, Paraguarí.
Voucher: *F. Mereles et al. 10096* (FCQ).

**Euphorbia hypericifolia** L., Sp. Pl. 1: 454. 1753.

Syn.: *Chamaesyce hypericifolia* (L.) Millsp., *Euphorbia boliviana* Rusby

Herb.
Departmental distribution: Alto Paraguay, Itapúa.
Voucher: *F. Mereles et al. 9923* (FCQ, G).

**Euphorbia prostrata** Aiton, Hort. Kew. 2: 139. 1789.

Syn.: *Chamaesyce prostrata* (Aiton) Small

Herb.
Departmental distribution: Central, Guairá.
Voucher: *F. Mereles 10123* (FCQ).

**Euphorbia selloi** (Klotzsch & Garcke) Boiss., Prodr. 15(2.1): 50. 1862.

Syn.: *Anisophyllum selloi* Klotzsch & Garcke, *Chamaesyce selloi* (Klotzsch & Garcke) Croizat, *Ch. selloi* var. *brevisemina* Croizat, *Euphorbia hassleriana* Chodat, *E. hebegyne* Pax & K.Hoffm. ex Emrich, *E. selloi* var. *setosa* auct. non Boiss., *E. setosa* (Boiss.) Müll.Arg.

Herb.
Departmental distribution: Central, Guairá.
Voucher: *F. Mereles 9938* (FCQ).
**Euphorbia serpens** Kunth var. *serpens*, Nov. Gen. Sp. 2: 52. 1817.

Syn.: *Chamaesyce serpens* (Kunth) Small

Herb.
Departmental distribution: Alto Paraguay, Amambay, Boquerón, Central, Presidente Hayes.
Voucher: *F. Mereles & S. Soria 9986* (BM, FCQ, G).

**Jatropha hieronymi** Kuntze, Revis. Gen. Pl. 3(2): 287. 1898.

Shrub or small tree.
Departmental distribution: Alto Paraguay, Boquerón.
Voucher: *F. Mereles 10192* (FCQ).

**FABACEAE**

**Aeschynomene falcata** (Poir.) DC. var. *falcata*, Prodr. 2: 322. 1825.

Syn.: *Aeschynomene apoloana* Rusby, *A. falcata* (Poir.) DC. var. *paucijuga* Benth., *Hedysarum diffusum* Vell., *H. falcatum* Poir.

Herb.
Departmental distribution: Caaguazú, Canindeyú, Central, Concepción, Cordillera, Guairá, Paraguari.
Voucher: *F. Mereles 1883* (FCQ).

**Bauhinia forficata** Link subsp. *pruinosa* (Vogel) Fortunato & Wunderlin, Darwiniana 27: 550. 1986.

Syn.: *Bauhinia candidans* Benth., *B. forficata* auct. non Link, *B. forficata* auct. non Hook. & Arn., *B. forficata* var. *candidans* (Benth.) Hassl. ex Latzina, *B. forficata* Link var. *pruinosa* (Vogel) Hassl., *B. pruinosa* Vogel, *Pauletia candidans* (Benth.) A.Schmitz, *P. pruinosa* (Vogel) A.Schmitz

Shrub or tree.
Departmental distribution: Alto Paraná, Caaguazú, Central, Cordillera, Itapúa.
Voucher: *F. Mereles et al. 9905* (FCQ, G).
**Chamaecrista rotundifolia** (Pers.) Greene var. *rotundifolia*, Pittonia 4(20): 31. 1899.

Syn.: *Cassia bifoliolata* DC. ex Collad., *Cassia bifoliolata* var. *pentandra* (Raddi) Desv., *Cassia bifoliolata* var. *rotundifolia* (Pers.) Desv., comb. illeg., *Cassia fabaginifolia* Kunth, *Cassia monophylla* Vell., *Cassia pentandra* Raddi, *Cassia pentandra* Larrañaga, hom. illeg., *Cassia rotundifolia* Pers., *Cassia tenuivenosa* A.P. D. Jones., *Chamaecrista bifoliolata* (DC. ex Collad.) Greene.

Herb or subshrub.
Departmental distribution: Alto Paraguay, Amambay, Caaguazú, Caazapá, Central, Cordillera, Guairá.
Voucher: *J. De Egea et al. 1337* (BM, FCQ).

**Crotalaria incana** L., Sp. Pl. 2: 716. 1753.

Syn.: *Chrysocalyx schimperi* Hochst. ex A. Rich., *Crotalaria affinis* DC., *Crotalaria eriocaula* S. Schauer, *Crotalaria cubensis* DC., *Crotalaria diffusa* Vell., hom. illeg., *Crotalaria eriocaula* S. Schauer, *Crotalaria glabrescens* Andersson, hom. illeg., *Crotalaria herbacea* Schweig. ex Schrank, *Crotalaria birta* Lag., hom. illeg., *Crotalaria incana* L. f. *microphylla* Chodat & Hassl., *Crotalaria megapotamica* Burkart, *Crotalaria montana* A. Rich., *Crotalaria picensis* Phil., *Crotalaria pubescens* Moench, *Crotalaria purpurascens* Lam., *Crotalaria radiata* Merr., *Crotalaria setifera* DC., *Lupinus rotundifolius* Sessè & Moç.

Herb or shrub.
Departmental distribution: Alto Paraguay, Amambay, Boquerón, Caaguazú, Caazapá, Canindeyú, Central, Concepción, Cordillera, Guairá, Itapúa, Paraguarí, Presidente Hayes, San Pedro.
Voucher: *J. De Egea et al. 1240* (FCQ).

**Desmodium cuneatum** Hook. & Arn., Bot. Misc. 3: 195. 1832.

Syn.: *Desmodium brevipes* Vogel, *Meibomia brevipes* (Vogel) Kuntze, *M. cuneata* (Hook. & Arn.) Kuntze

Subshrub.
Departmental distribution: Alto Paraguay, Amambay, Caazapá, Canindeyú, Central, Concepción, Cordillera, Guairá, Itapúa, Misiones, Ñeembucú, Paraguarí, Presidente Hayes, San Pedro.
Voucher: *J. De Egea et al. 1338* (BM, FCQ).
Desmodium tortuosum (Sw.) DC., Prodr. 2: 332. 1825.

Syn.: Desmodium purpureum (Mill.) Fawc. & Rendle, hom. illeg., Hedysarum purpureum Mill., H. tortuosum Sw., Meibomia purpurea (Mill.) Vail, M. tortuosa (Sw.) Kuntze.

Subshrub.
Departmental distribution: Amambay, Caaguazú, Concepción, Itapúa, Paraguarí.
Voucher: F. Mereles & F. González Parini 7837 (FCQ).

Indigofera bongardiana (Kuntze) Burkart var. bongardiana, Darwiniana 4: 171. 1942.

Syn.: Anila bongardiana Kuntze, Indigofera gracilis Bong. ex Benth.

Herb.
Departmental distribution: Amambay, Caaguazú, Canindeyú, Central, Itapúa, Misiones, San Pedro.
Voucher: F. Mereles & J. De Egea 10132 (FCQ, G).

Lupinus gibertianus C.P.Sm. var. gibertianus, Spec. Lupinorum 206. 1940.

Syn.: Cytisus heptaphyllus Vell., Lupinus aspersus C.P.Sm., L. bonplandianus C.P.Sm., L. hassleranus C.P.Sm., L. heptaphyllus (Vell.) Hassl., L. heptaphyllus f. hilarianus Benth., L. heptaphyllus f. typicus Hassl., nom. inval., L. hilarianus Benth., nom. superfl., L. propedubius C.P.Sm., L. sanctae-anae C.P.Sm., L. subumbellatus C.P.Sm.

Herb.
Departmental distribution: Itapúa, Ñeembucú, San Pedro.
Voucher: J. De Egea et al. 1283 (FCQ).

Senna morongii (Britton) H.S.Irwin & Barneby, Mem. New York Bot. Gard. 35: 364. 1982.

Syn.: Cassia acinacarapa Rusby, C. cochabambae Herzog, C. morongii Britton, C. rojasiana Hassl., C. tomentosa L. f. var. paucijuga Kuntze

Subshrub.
Departmental distribution: Alto Paraguay, Boquerón, Concepción, Misiones, Paraguarí, Presidente Hayes.
Voucher: F. Mereles & S. Soria 9958 (BM, FCQ, G).
**Senna obtusifolia** (L.) H.S.Irwin & Barneby, Mem. New York Bot. Gard. 35: 252. 1982.

Syn.: Cassia humilis Collad., *S. obtusifolia* L., *C. tora* L. var. *humilis* Collad., *C. toroides* Raf., *C. toroides* Roxb., nom. nud., Diallobus falcatus Raf., nom. illeg., *D. uniflorus* Raf., Emelista *tora* (L.) Britton & Rose, Senna *toroides* Roxb.

Herb or subshrub.
Departmental distribution: Alto Paraguay, Alto Paraná, Boquerón, Caaguazú, Caazapá, Canindeyú, Central, Cordillera, Guairá, Itapúa, Paraguarí, Presidente Hayes.
Voucher: *J. De Egea et al. 1312* (FCQ).

**Senna occidentalis** (L.) Link., Handbuch 2: 140. 1831.

Syn.: Cassia caroliniana Walter, *C. ciliata* Raf., *C. falcata* L., *C. foetida* Pers., nom. illeg., *C. macradena* Collad., *C. obliquifolia* Schrank, *C. occidentalis* L., *C. occidentalis* var. *aristata* Collad., *C. planisiliqua* L., *C. planisiliqua* Lam., hom. illeg., *C. plumieri* DC., Ditremexa *occidentalis* (L.) Britton & Rose ex Britton & Wilson, Senna *occidentalis* (L.) Roxb., comb. superfl.

Herb or subshrub.
Departmental distribution: Alto Paraguay, Amambay, Boquerón, Caaguazú, Caazapá, Canindeyú, Central, Concepción, Cordillera, Guairá, Misiones, Ñeembucú, Paraguari, Presidente Hayes, San Pedro.
Voucher: *J. De Egea et al. 1262* (FCQ).

**Vicia epetiolaris** Burkart var. *epetiolaris*, Darwiniana 14: 182. 1966.

Vine.
Departmental distribution: Central, Misiones, Presidente Hayes.
Voucher: *G. Céspedes 439* (FCQ).

**LAMIACEAE**

**Hyptis lappacea** Benth., Labiat. Gen. Sp. 103. 1833.

Syn.: Hyptis *cinerea* Morong, *H. cinerea* var. *genuina* Briq., nom. inval., *H. cinerea* var. *stenophylla* Briq., *H. globifera* auct. non G.Mey., *H. michelii* Briq. ex Micheli, *H. trichoneura* Briq. ex Micheli, Mesosphaerum *cinereum* (Morong) Briq., *M. lappacea* (Benth.) Kuntze, *M. trichoneurum* (Briq. ex Micheli) Briq.
Leonotis nepetifolia (L.) R.Br., Hortus Kew. (2nd ed.) 3: 409. 1811.

Syn.: Phlomis nepetaefolia L.

Herb. Introduced.
Departmental distribution: Amambay, Caazapá, Central, Cordillera, Paraguari, San Pedro.
Voucher: E. Zardini 8223 (FCQ, MO).

► Leonurus cardiaca L., Sp. Pl. 2: 584. 1753.

Herb. Introduced.
Departmental distribution: Guairá.
Voucher: R. Degen et al. 3811 (FCQ).

Leonurus japonicus Houtt., Nat. Hist. 2(9): 366, t. 57, f. 1. 1778.

Syn.: Leonurus sibiricus auct. non L.

Herb. Introduced.
Departmental distribution: Alto Paraná, Caazapá, Central, Guairá, Itapúa, Paraguari.
Voucher: R. Degen 1516 (FCQ).

Scutellaria racemosa Pers., Syn. Pl. 2(1): 136. 1806.

Syn.: Scutellaria bonariensis Willd. ex Benth., S. hastata Larrañaga, S. heterophylla Willd. ex Benth., S. ruminicifolia Kunth, S. rojasii Briq.

Herb.
Departmental distribution: Alto Paraguay, Caaguazú, Canindeyú, Central, Concepción, Cordillera, Itapúa, Misiones, Ñeembucú, Paraguari, Presidente Hayes, San Pedro.
Voucher: J. De Egea 1299 (BM, FCQ).
LYTHRACEAE

*Cuphea carthagenensis* (Jacq.) J.F.Macbr., Publ. Field Mus. Nat. Hist., Bot. Ser. 8: 124. 1930.

Syn.: *Cuphea balsamona* Cham. & Schltdl., *Lythrum carthagenense* Jacq.

Herb or subshrub.
Departmental distribution: Amambay, Caazapá, Canindeyú, Central, Concepción, Cordillera, Guairá, Itapúa, Misiones, Ñeembucú, Paraguarí, Presidente Hayes, San Pedro.
Voucher: *N. Soria 3111a* (FCQ).

*Cuphea racemosa* (L.f.) Spreng. subsp. *racemosa*, Syst. Veg. (ed. 16) 2: 455. 1825.

Syn.: *Cuphea obtusifolia* Koehne ex Bacig., *C. origanifolia* Cham. & Schltdl., *C. racemosa* var. *discolor* Lourteig, *Lythrum racemosum* L.f.

Herb or subshrub.
Departmental distribution: Alto Paraná, Amambay, Caaguazú, Caazapá, Canindeyú, Central, Concepción, Cordillera, Guairá, Itapúa, Misiones, Ñeembucú, Paraguarí, Presidente Hayes, San Pedro.
Voucher: *G. Céspedes 428* (FCQ).

*Heimia salicifolia* Link., Icon. Pl. Select. 63, t. 28. 1822.

Syn.: *Nesaea salicifolia* Kunth

Shrub or subshrub.
Departmental distribution: Alto Paraguay, Alto Paraná, Amambay, Boquerón, Caaguazú, Caazapá, Canindeyú, Central, Concepción, Cordillera, Guairá, Itapúa, Misiones, Ñeembucú, Paraguarí, Presidente Hayes, San Pedro.
Voucher: *F. Mereles et al. 10012* (BM, FCQ, G).

*Pleurophora saccocarpa* Koehne, Bot. Jahrb. Syst. 2(5): 426. 1882.

Syn.: *Pleurophora annulosa* Koehne, *P. saccocarpa* Koehne var. *siebrigii* Koehne, *P. saccocarpa* var. *glabrescens* Koehne, *P. saccocarpa* var. *hirtella* Koehne, *P. saccocarpa* var. *velutina* Koehne

Shrub.
Departmental distribution: Alto Paraguay, Alto Paraná, Amambay, Boquerón, Canindeyú, Central, Concepción, Misiones, Ñeembucú, Paraguarí, Presidente Hayes, San Pedro.
Voucher: *F. Mereles & J. De Egea 10137* (BM, FCQ, G).

**MALVACEAE**

*Abutilon pauciflorum* A.St.-Hil., Fl. Bras. Merid. 1: 206. 1827.

Syn.: *Abutilon melanocarpum* A.St.-Hil. & Naudin, *A. mollissimum* auct. non (Cav.) Sweet, *A. pauciflorum* A.St.-Hil. var. *cano-tomentosum* Hassl., *A. pauciflorum* f. *longe-corniculatum* Hassl., *A. pedunculare* auct. non Humb., Bonpl. & Kunth, *A. rugosulum* Hochr. ex Chodat & Hassl.

Shrub.
Departmental distribution: Central, Concepción, Cordillera, Guairá, Ñeembucú, Paraguarí, Presidente Hayes.
Voucher: *I. Basualdo 17* (FCQ).

*Corchorus hirtus* L., Sp. Pl., ed. 2. 2: 747. 1762.

Syn.: *Corchorus hirtus* L. var. *cuyabensis* K.Schum, *C. hirtus* var. *orinocensis* (Kunth) K.Schum., *C. orinocensis* Kunth, *C. pilolobus* Link

Herb or subshrub.
Departmental distribution: Alto Paraguay, Alto Paraná, Amambay, Boquerón, Canindeyú, Central, Concepción, Cordillera, Ñeembucú, Paraguarí, Presidente Hayes, San Pedro.
Voucher: *M. Dematteis et al. 2927* (FCQ).

*Malvastrum coromandelianum* (L.) Gracke subsp. *coromandelianum*, Bonplandia 5(18): 295. 1857.

Syn.: *Malva coromandeliana* L., *Malva tricuspidata* Aiton, *Malvastrum carpinifolium* A.Gray, *Malvastrum coromandelianum* (L.) Garcke f. *breviaristata* Hassl., *Malvastrum tricuspidatum* (Aiton) A.Gray, *Malveopsis coromandeliana* (L.) Morong

Subshrub.
Departmental distribution: Alto Paraguay, Amambay, Boquerón, Caaguazú, Central, Concepción, Cordillera, Guairá, Itapúa, Paraguarí, Presidente Hayes, San Pedro.
Voucher: *F. Mereles et al. 9926* (FCQ).
**Melochia canescens** Cristóbal, Bonplandia 9(1–2): 43. 1996.

Subshrub.
Departmental distribution: Alto Paraguay, Boquerón, Ñeembucú, Presidente Hayes.
Voucher: *F. Mereles & S. Soria 9947* (BM, CTES, FCQ, G).

**Melochia hermannioides** A.St.-Hil., Fl. Bras. Merid. 1(4): 163. 1825.

Syn.: *Melochia hermannioides* f. *heterophylla* Hassl., *M. hermannioides* var. *lacinulata* (K.Schum. & Hassl.) Hassl., *M. hermannioides* var. *lanceolata* Hassl., *M. hermannioides* f. *typica* Hassl., nom. inval., *M. lacinulata* K.Schum. & Hassl., *Melochia parvifolia* Kunth f. *roseiflora* K.Schum. & Hassl.

Herb or subshrub.
Departmental distribution: Caaguazú, Canindeyú, Central, Concepción, Cordillera, Guairá, Misiones, Ñeembucú, Paraguarí, Presidente Hayes, San Pedro.
Voucher: *F. Mereles & J. De Egea 10141* (FCQ, G).

**Melochia ministella** Cristóbal, Bonplandia 9(1–2): 46. 1996.

Subshrub.
Departmental distribution: Alto Paraguay, Concepción, Itapúa, Presidente Hayes.
Voucher: *F. Mereles et al. 9925* (BM, FCQ, G).

**Melochia pyramidata** L. var. *hieronymi* K.Schum., Fl. Bras. 12(3): 35. 1886.

Syn.: *M. pyramidata* L. f. *intermedia* Hassl., *M. pyramidata* var. *pseudotomentosa* Hassl., *M. pyramidata* f. *transitoria* K.Schum. & Hassl., *Melochia tomentosa* L. var. *mattogrossensis* R.E.Fr.

Subshrub.
Departmental distribution: Alto Paraguay, Amambay, Caaguazú, Caazapá, Canindeyú, Central, Concepción, Cordillera, Guairá, Itapúa, Misiones, Ñeembucú, Paraguarí, Presidente Hayes, San Pedro.
Voucher: *C.L. Cristóbal & A. Krapovickas 2293* (FCQ).
**Melochia pyramidata** L. var. *pyramidata*, Sp. Pl. 2: 674. 1753.

Subshrub.
Departmental distribution: Alto Paraguay, Amambay, Boquerón, Central, Concepción, Itapúa, Misiones, Paraguari, Presidente Hayes, San Pedro.
Voucher: *R. Spichiger et al. RS2621* (FCQ).

**Pavonia sidifolia** Kunth, Nov. Gen. Sp. 5: 283. 1822.

Syn.: *Asterochaena sidifolia* (Kunth) Hassl., *A. sidifolia* ssp. *diuretica* (A.St.-Hil.) Hassl., *A. sidifolia* var. *paraguayensis* Hassl., *Pavonia diuretica* A.St.-Hil.

Shrub or subshrub.
Departmental distribution: Alto Paraguay, Amambay, Canindeyú, Central, Concepción, Cordillera, Guairá, Misiones, Paraguari, Presidente Hayes, San Pedro.
Voucher: *A. Schinini 23872* (FCQ).

**Pseudabutilon callimorphum** (Hochr.) R.E.Fr. var. *callimorphum*, Kungl. Svenska Vetenskapsakad. Handl. 43(4): 105. 1908.

Syn.: *Sida callimorpha* Hochr., *Wissadula callimorpha* (Hochr.) Hassl.

Subshrub.
Departmental distribution: Alto Paraguay, Boquerón, Concepción, Presidente Hayes.
Voucher: *F. Mereles & S. Soria 9939* (BM, CTES, FCQ, G).

**Sida cordifolia** L., Sp. Pl. 2: 684. 1753.

Syn.: *Malvastrum cordifolium* Rojas Acosta, *Sida altheifolia* Sw., *S. cordifolia* L. var. *breviaristata* Monteiro, *S. rotundifolia* Lam.

Subshrub.
Departmental distribution: Alto Paraguay, Amambay, Boquerón, Caaguazú, Caazapá, Central, Concepción, Cordillera, Guairá, Paraguari, Presidente Hayes, San Pedro.
Voucher: *J. De Egea et al. 1264* (FCQ).
**Sida linifolia** Cav., Diss. 1, Diss. Bot. 14 (t. 2, f. 1). 1785.

Syn.: *Sida fiebrigii* Ulbr., *S. linifolia* Juss. ex Cav. f. *flaviflora* Chodat & Hassl.

Herb.

Departmental distribution: Amambay, Caaguazú, Central, Concepción, Cordillera, Guairá, Paraguarí, San Pedro.

Voucher: *F. Mereles 3983* (FCQ).

**Sida rhombifolia** L., Sp. Pl. 2: 684. 1753.

Syn.: *Sida rhombifolia* L. var. *canariensis* (Willd.) Griseb., *S. rhombifolia* var. *rhomboidea* (Roxb.) Mast., *S. rhomboidea* Roxb., *S. subrhomboiformis* Larrañaga

Herb or subshrub.

Departmental distribution: Alto Paraguay, Amambay, Boquerón, Caaguazú, Central, Cordillera, Guairá, Itapúa, Ñeembucú, Paraguarí, Presidente Hayes, San Pedro.

Voucher: *J. De Egea et al. 1231* (FCQ).

**Sida santaremensis** Monteiro, Monogr. Malv. Brasil. Fasc. I. 44. 1936.

Syn.: *Sida glaziovii* auct. non K.Schum., *S. rhombifolia* L. var. *subtomentosa* K.Schum., *S. santaremensis* Monteiro var. *krapovickasiana* Monteiro

Subshrub.

Departmental distribution: Alto Paraguay, Amambay, Boquerón, Caaguazú, Central, Concepción, Cordillera, Guairá, Paraguarí, Presidente Hayes, San Pedro.

Voucher: *N. Soria 1234* (FCQ).

**Sida spinosa** L., Sp. Pl. 2: 683. 1753.

Syn.: *Sida angustifolia* Lam., *S. escobilla* Larrañaga, *S. spinosa* L. var. *angustifolia* (Lam.) Griseb.

Subshrub.

Departmental distribution: Alto Paraguay, Boquerón, Central, Cordillera, Guairá, Paraguarí, Presidente Hayes.

Voucher: *E. Bordas 4198* (FCQ).
**Sidastrum paniculatum** (L.) Fryxell, Brittonia 30(4): 453. 1978.

Syn.: *Sida paniculata* L.

Subshrub.
Departmental distribution: Alto Paraguay, Caaguazú, Canindeyú, Central, Concepción, Cordillera, Guairá, Misiones, Ñeembucú, Paraguarí, Presidente Hayes, San Pedro.
Voucher: *G. Schmeda 314* (FCQ).

**Triumfetta semitriloba** Jacq., Enum. Syst. Pl. 22. 1760.

Syn.: *Triumfetta abutiloides* A.St.-Hil., *T. tricuspis* A.St.-Hil.

Shrub.
Departmental distribution: Alto Paraná, Amambay, Caaguazú, Caazapá, Canindeyú, Central, Concepción, Cordillera, Guairá, Itapúa, Misiones, Ñeembucú, Paraguarí, San Pedro.
Voucher: *I. Basualdo 818* (FCQ).

**Waltheria indica** L., Sp. Pl. 2: 673. 1753.

Syn.: *Waltheria americana* L., *W. americana var. indica* (L.) K.Schum.

Subshrub.
Departmental distribution: Alto Paraguay, Alto Paraná, Amambay, Boquerón, Caaguazú, Canindeyú, Central, Concepción, Cordillera, Guairá, Itapúa, Misiones, Ñeembucú, Paraguarí, Presidente Hayes, San Pedro.
Voucher: *I. Basualdo 179* (FCQ).

**Wissadula densiflora** R.E.Fr. var. *densiflora*, Kungl. Svenska Vetenskapsakad. Handl. 43(4): 64, pl. 4, 6. 1908.

Subshrub.
Departmental distribution: Alto Paraguay, Boquerón, Presidente Hayes.
Voucher: *F. Mereles & S. Soria 9948* (BM, FCQ, G).
**Wissadula subpeltata** (Kuntze) R.E.Fr., Kungl. Svenska Vetenskapsakad. Handl. 43(4): 56, pl. 5, 6, 7. 1908.

Syn.: *Abutilon amplissimum* (L.) Kuntze var. *subpeltatum* Kuntze, *Wissadula amplissima* auct. non (L.) R.E.Fr.

Shrub.
Departmental distribution: Alto Paraguay, Alto Paraná, Amambay, Caaguazú, Concepción, Cordillera, Guairá, Paraguarí, Presidente Hayes.
Voucher: *M. Dematteis et al. 2788* (FCQ).

**MOLLUGINACEAE**

*Mollugo verticillata* L., Sp. Pl. 1: 89. 1753.

Syn.: *Mollugo arenaria* Kunth

Herb.
Departmental distribution: Alto Paraguay, Amambay, Boquerón, Caazapá, Central, Concepción, Cordillera, Paraguarí, Presidente Hayes.
Voucher: *G. Céspedes 424* (FCQ).

**MORACEAE**

*Dorstenia brasiliensis* Lam., Encycl. 2(1): 317. 1786.

Syn.: *D. brasiliensis* Lam. f. *balansae* Chodat, *D. brasiliensis* var. *guaranitica* Chodat, hom. illeg., *D. brasiliensis* var. *major* Chodat & Hassl., *D. brasiliensis* var. *palustris* Hassl., *D. brasiliensis* var. *tomentosa* (Fisch. & C.A.Mey.) Hassl., *D. brasiliensis* var. *tubicina* (Ruiz & Pav.) Chodat & Vischer *D. brasiliensis* var. *typica* Hassl., nom. inval., *D. montevidensis* Field & Gardner, *Dorstenia schulzii* Carauta, C.Valente & Dunn de Araujo, *D. tomentosa* Fisch. & C.A.Mey., *D. tubicina* Ruiz & Pav., *D. tubicina* var. *genuina* Hassl., nom. inval., *D. tubicina* f. *major* Hassl., *D. tubicina* var. *opifera* (Mart.) Hassl. *D. tubicina* f. *subexcelentrica* Hassl., *D. tubicina* f. *typica* Hassl., nom. inval.

Herb.
Departmental distribution: Alto Paraguay, Amambay, Caaguazú, Central, Cordillera, Guairá, Ñeembucú, Presidente Hayes, San Pedro.
Voucher: *J. De Egea et al. 1255* (FCQ).
NYCTAGINACEAE

**Boerhavia diffusa** L. var. *diffusa*, Sp. Pl. 1: 3. 1753.

Syn.: *Boerhavia coccinea* Mill. var. *paniculata* (Rich.) Moscoso, *B. paniculata* Rich.

Herb. Introduced.

Departmental distribution: Alto Paraguay, Boquerón, Caazapá, Central, Guairá, Presidente Hayes.

Voucher: *F. Mereles & S. Soria 9985* (BM, FCQ, G).

**Boerhavia diffusa** L. var. *leiocarpha* (Heimerl) C.D.Adams, Mitt. Bot. Staatssamml. München 8: 115. 1970.

Syn.: *Boerhavia ciliato-bracteata* Heimerl, *B. coccinea* Mill. var. *leiocarpa* (Heimerl) Standl., *B. diffusa* L. var. *paniculata* D.Parodi, nom. nud., *B. friesii* Heimerl, *B. paniculata* Rich. var. *guaranitica* Heimerl, *B. paniculata* var. *leiocarpa* Heimerl, *B. paniculata* f. *leiocarpa* Heimerl

Herb. Introduced.

Departmental distribution: Alto Paraguay, Cordillera, Presidente Hayes.

Voucher: *F. Mereles & J. De Egea 10184* (FCQ).

ONAGRACEAE

**Ludwigia lagunae** (Morong) H.Hara, J. Jap. Bot. 28: 292. 1953.

Syn.: *Jussiaea brachycarpa* Lam. ssp. *epilobioides* (Chodat & Hassl.) Hassl., *J. brachycarpa* var. *genuina* Hassl., nom. inval., *J. brachycarpa* var. *grandiflora* Hassl., *J. brachycarpa* var. *paraguayensis* (Chodat) Hassl., *J. brachycarpa* var. *parviflora* (Chodat & Hassl.) Hassl., *J. brachycarpa* var. *puberula* Hassl., *J. brachycarpa* Micheli, hom. illeg., *J. epilobioides* Chodat & Hassl., *J. epilobioides* var. *parviflora* Chodat & Hassl., *J. lagunae* Morong, *J. lagunae* var. *paraguayensis* (Chodat) Munz, *J. lagunae* var. *typica* Munz, nom. inval., *J. leveilleana* Bertoni, *J. paraguayensis* Chodat, *J. suffruticosa* L. var. *epilobioides* (Chodat & Hassl.) Bertoni, *J. suffruticosa* var. *paraguayensis* (Chodat) Bertoni, *J. suffruticosa* var. *parviflora* (Chodat & Hassl.) Bertoni

Herb or subshrub.

Departmental distribution: Alto Paraguay, Amambay, Caaguazú, Canindeyú, Central, Concepción, Cordillera, Guairá, Misiones, Neembucú, Paraguarí, Presidente Hayes, San Pedro.

Voucher: *F. Mereles & J. De Egea 10151* (FCQ, G).
OXALIDACEAE

**Oxalis conorrhiza** Jacq., Monographia, Iconibus Illustrata 26. 1794.

Syn.: *Acetosella caespitosa* (A.St.-Hil.) Kuntze, *A. chrysantha* (Progel) Kuntze, *A. cineracea* (A.St.-Hil.) Kuntze, *A. commersonii* (Pers.) Kuntze, *A. conorrhiza* (Jacq.) Kuntze, *A. megapotamica* (Spreng.) Kuntze, *Oxalis andicola* Gillies ex Hook. & Arn., *O. andicola* var. *wallichiana* Gillies ex Hook. & Arn., *O. brevipes* Fredr., *O. caespitosa* A.St.-Hil., *O. chrysantha* Progel, *O. chrysantha* var. *pusilla* Progel, *O. cineracea* A.St.-Hil., *O. commersonii* Pers., *O. corrihixia* Larrañaga, *O. cordobensis* R.Knuth, *O. cordobensis* var. *humilior* R.Knuth, *O. corniculata* L. var. *serpens* R.Knuth, *O. bassleriana* Chodat, *O. linneiformis* R. Knuth, *O. megapotamica* Spreng., *O. repens* Thunb. f. *uniflora* Hieron. & Lorentz ex R.Knuth, nom. nud., *O. sexenata* Savigny, *O. sternbergii* auct. non Zucc., *Xanthoxalis chrysantha* (Progel) Holub, *X. commersonii* (Pers.) Holub, *X. cordobensis* (R.Knuth) Holub

Herb.
Departmental distribution: Alto Paraná, Alto Paraguay, Amambay, Caaguazú, Central, Concepción, Cordillera, Misiones, Presidente Hayes.
Voucher: *F. Mereles et al. 8100* (FCQ).

**Oxalis corniculata** L. var. *corniculata*, Sp. Pl. 1: 435. 1753.

Syn.: *Acetosella corniculata* (L.) Kuntze, *A. corniculata* var. *repens* (Thunb.) Kuntze, *Oxalis steudeliana* R.Knuth, *Xanthoxalis corniculata* (L.) Small

Herb.
Departmental distribution: Alto Paraná, Central, Cordillera, Guairá.
Voucher: *E. Zardini 23445* (AS, MO).

**Oxalis paludosa** A.St.-Hil., Fl. Bras. Merid. 1: 121. 1825.

Syn.: *Acetosella montevidensis* (Progel) Kuntze, *A. paludosa* (A.St.-Hil.) Kuntze, *Oxalis corrientesensis* R.Knuth, *O. duricaulis* R.Knuth, *O. montevidensis* Progel

Herb.
Departmental distribution: Central, Cordillera, Ñeembucú, Paraguarí, Presidente Hayes.
Voucher: *G. Céspedes 438* (FCQ).
PASSIFLORACEAE

*Turnera grandidentata* (Urb.) Arbo, Candollea 40(1): 176. 1985.

Syn.: *Turnera ulmifolia* L. var. *elegans* auct. non (Otto) Urb., *T. ulmifolia* L. var. *grandidentata* Urb.

Herb. Endemic.
Departmental distribution: Caaguazú, Central, Concepción, Cordillera, Misiones, Paraguarí, San Pedro.
Voucher: *F. González & M. J. López 554* (FCQ).

PHYLLANTHACEAE

*Phyllanthus niruri* L., Sp. Pl. 2: 981. 1753.

Syn.: *Phyllanthus lathyroides* Kunth, *P. lathyroides* f. *rosellus* Müll.Arg., *P. niruri* L. ssp. *lathyroides* (Kunth) G.L.Webster, *P. microphyllus* Mart., *P. niruri* f. *microphyllus* (Müll.Arg.) G.L.Webster, *P. rosellus* (Müll.Arg.) Müll.Arg.

Herb.
Departmental distribution: Caazapá, Canindeyú, Central, Concepción, Cordillera, Guairá, Itapúa, Ñeembucú, Paraguarí.
Voucher: *E. Zardini et al. 2421* (FCQ, MO).

*Phyllanthus orbiculatus* Rich., Actes Soc. Hist. Nat. Paris 1:113. 1792.

Syn.: *Orbicularia orbiculata* (Rich.) Moldenke

Herb.
Departmental distribution: Alto Paraná, Amambay, Canindeyú, Central, Concepción, Cordillera, Guairá, Paraguarí.
Voucher: *E. Zardini & R. Degen 3767* (FCQ, MO).

PLANTAGINACEAE

*Plantago tomentosa* Lam. ssp. *tomentosa*, Tabl. Encycl. 1(2): 340. 1792.

Syn.: *Plantago achalensis* Pilg., *P. achalensis* var. *birtula* Pilg., *P. achalensis* f. *minor* Pilg., *P. affinis* Decne., *P. arechavaletai* Pilg., *P. bicallosa* Decne. var. *hirsutior* Pilg., *P.
grisebachii Hieron., *P. hypolasia* Pilg., *P. hypoleuca* Pilg., *P. oreades* Decne. var. *lanuginosa* Griseb., *P. paralias* Decne., *P. paralias* var. *achalensis* (Pilg.) Pilg., *P. paralias* ssp. *affinis* (Decne.) Pilg., *P. paralias* var. *brevifolia* Pilg., *P. paralias* var. *cordobensis* (Pilg.) Pilg., *P. paralias* ssp. *dasystachys* (Pilg.) Pilg., *P. paralias* ssp. *euparalias* Pilg., nom. inval., *P. paralias* var. *glabrescens* (Pilg.) Pilg., *P. paralias* ssp. *grisebachii* (Hieron.) Pilg., *P. paralias* ssp. *hypolasia* (Pilg.) Pilg., *P. paralias* var. *lasiophylla* (Pilg.) Pilg., *P. paralias* ssp. *leiocalyx* (Pilg.) Pilg., *P. paralias* var. *mollior* (Pilg.) Pilg., *P. paralias* ssp. *petiolata* (Pilg.) Pilg., *P. paralias* var. *saxicola* (Pilg.) Pilg., *P. paralias* ssp. *schlechtendaliana* (Pilg.) Pilg., *P. paralias* ssp. *selloana* (Pilg.) Pilg., *P. tomentosa* var. *achalensis* Pilg., *P. tomentosa* ssp. *balansai* Pilg., *P. tomentosa* var. *brevifolia* Pilg., *P. tomentosa* var. *cordobensis* Pilg., *P. tomentosa* ssp. *dasystachys* Pilg., *P. tomentosa* var. *glabrescens* Schmidt, *P. tomentosa* Lam. ssp. *grisebachii* (Hieron.) Pilg., *P. tomentosa* ssp. *hylpolasia* (Pilg.) Pilg., *P. tomentosa* var. *lasiophylla* Pilg., *P. tomentosa* ssp. *leiocalyx* Pilg., *P. tomentosa* var. *mollior* Pilg., *P. tomentosa* ssp. *paralias* (Decne.) Pilg., *P. tomentosa* ssp. *petiolata* Pilg., *P. tomentosa* var. *saxicola* Pilg., *P. tomentosa* ssp. *schlechtendaliana* Pilg., *P. tomentosa* ssp. *selloana* Pilg.

**Scoparia dulcis** L., Sp. Pl. 1: 116. 1753.

Syn.: *Capraria dulcis* (L.) Kuntze, *Scoparia dulcis* L. var. *tenuifolia* Griseb., *S. nudicaulis* Chodat & Hassl., *S. procumbens* Jacq., *S. purpurea* Ridley.

Herb or subshrub.

Departmental distribution: Alto Paraguay, Caaguazú, Caazapá, Canindeyú, Central, Cordillera, Guairá, Ñeembucú, Paraguarí, Presidente Hayes, San Pedro.

Voucher: *F. Mereles et al. 10072* (FCQ).

**Scoparia ericacea** Cham. & Schltdl., Linnaea 2: 604. 1827.

Syn.: *Capraria ericacea* (Cham. & Schltdl.) Kuntze, *Scoparia divaricata* R.E.Fr., *S. plebeja* Cham. & Schltdl.

Herb or subshrub.

Departmental distribution: Alto Paranaí, Cordillera, Presidente Hayes, San Pedro.

Voucher: *F. Mereles et al. 10071* (FCQ).
**Stemodia verticillata** (Mill.) Hassl., Trab. Mus. Farmacol. 21: 110. 1909.

Syn.: *Capraria humilis* Sol., *Eринus verticillatus* Mill., *Lendneria humilis* (Sol.) Minod, *L. verticillata* (Mill.) Britton, *Stemodia arenaria* Kunth, *Stemodia humilis* (Sol.) G. Dawson, *Stemodia macrotricha* Colla, *Stemodia parviflora* W.T.Aiton, *Stemodiacra verticillata* (Mill.) Kuntze

Herb.

Departmental distribution: Caazapá, Canindeyú, Cordillera, Guairá, Ñeembucú, San Pedro.

Voucher: *J. De Egea et al. 1220* (BM, FCQ).

**POACEAE**

**Andropogon bicornis** L., Sp. Pl. 2: 1046. 1753.

Syn.: *Andropogon bicornis* L. var. *absconditus* Hack., *A. bicornis* var. *burchellii* Hack., *A. bicornis* var. *gracillimus* Hack., *A. bicornis* var. *virginicoides* Hack.

Herb.

Departmental distribution: Alto Paraná, Amambay, Canindeyú, Central, Guairá, Itapúa, Misiones, Ñeembucú, Paraguarí, Presidente Hayes, San Pedro.

Voucher: *F. Mereles et al. 10179* (FCQ, G).

►**Avena sativa** L. subsp. *sativa*, Sp.Pl. 1: 79. 1753.

Syn.: *Avena fatua* L. f. *glaberrima* Thell., *A. fatua* ssp. *sativa* (L.) Thell., *A. sativa* L. var. *glaberrima* (Thell.) Parodi

Herb. Introduced.

Departmental distribution: Alto Paraná.

Voucher: *F. Mereles et al. 10074* (FCQ).

**Cenchrus ciliaris** L., Mant. Pl. 2: 302. 1771.

Syn.: *Pennisetum cenchroides* Rich. ex Pers., nom. illeg., *P. ciliare* (L.) Link

Herb. Introduced.

Departmental distribution: Alto Paraguay, Boquerón, Guairá, Presidente Hayes.

Voucher: *F. Mereles & S. Soria 9969* (FCQ, G).
Cenchrus echinatus L., Sp. Pl. 2: 1050. 1753.

Syn.: Cenchrus crinitus Mez, C. echinatus Cav., nom. inval.

Herb.
Departmental distribution: Alto Paraguay, Alto Paraná, Central, Concepción, Cordillera, Guairá, Itapúa, Paraguarí, Presidente Hayes, San Pedro.
Voucher: J. De Egea et al. 1293 (FCQ).

Cenchrus purpureus (Schumach.) Morrone, Ann. Bot. (Oxford) 106(1): 129. 2010.

Syn.: Pennisetum purpureum Schumach.

Herb. Introduced.
Departmental distribution: Alto Paraná, Canindeyú, Central, Paraguarí.
Voucher: F. Mereles et al. 10083 (BM, FCQ, G).

Chloris virgata Sw., Fl. Ind. Occid. 1: 203. 1797.

Syn.: Chloris compressa DC., C. elegans Kunth

Herb.
Departmental distribution: Alto Paraguay, Boquerón.
Voucher: F. Mereles & S. Soria 10195 (FCQ).

Cynodon dactylon (L.) Pers. var. dactylon, Syn. Pl. 1: 85. 1805.

Syn.: Capriola dactylon (L.) Kuntze, Cynodon aristiglumis Caro & E.A. Sánchez, Cynodon aristulatus Caro & E.A. Sánchez, Cynodon erectus J. Presl., Cynodon pascurus Nees, Panicum dactyon L.

Herb. Introduced.
Departmental distribution: Alto Paraná, Cordillera, Guairá, Itapúa, San Pedro.
Voucher: J. De Egea et al. 1304 (FCQ).

Cynodon dactylon (L.) Pers. var. longiglumis Caro & E.A. Sánchez, Kurtziana 5: 210, f. 2G. 1969.

Herb.
Departmental distribution: Itapúa, San Pedro.
Voucher: J. De Egea et al. 1282 (FCQ).

**Digitaria aequiglumis** (Hack. & Arechav.) Parodi var. *aequiglumis*, Revista Fac. Agron. Veterin. 4: 47. 1922.

Syn.: *Digitaria campestris* Henrard, *D. chillanensis* Phil. ex Henrard, nom. nud., *Panicum aequiglume* Hack. & Arechav., *P. debile* Phil., nom. illeg., *P. debile* Desf. var. *aequiglume* (Hack. & Arechav.) Hack., *P. ramosum* Arechav., *P. tridactylum* Phil., hom. illeg., *Syntherisma aequiglumis* (Hack. & Arechav.) Hitchc.

Herb.
Departmental distribution: Alto Paraná, Central, Itapúa, Presidente Hayes.
Voucher: C.V.M. Pavetti 10974 (Zuloaga et al. 1994).

**Digitaria balansae** Henrard, Meded. Rijks-Herb. 61: 2. 1930.

Herb.
Departmental distribution: Alto Paraná, Caaguazú, Caazapá, Cordillera, Guairá, Itapúa, Misiones, Paraguari, Presidente Hayes.
Voucher: T. Rojas 11188 (AS, MO).

**Digitaria bicornis** (Lam.) Roem. & Schult., Syst. Veg. (ed. 15 bis) 2: 470. 1817.

Syn.: *Paspalum bicorne* Lam., *Panicum bicorne* (Lam.) Kunth, *Panicum glaucescens* Nees, hom. illeg.

Herb. Introduced.
Departmental distribution: Alto Paraguay, Alto Paraná, Amambay, Boquerón, Central, Concepción, Cordillera, Itapúa, Misiones, Presidente Hayes, San Pedro.
Voucher: F. Mereles et al. 9918 (FCQ).

**Digitaria ciliaris** (Retz.) Koeler, Descr. Gram. 27. 1802.

Syn.: *Digitaria abortiva* Reeder, *D. adscendens* (Kunth) Henrard, *D. marginata* Link, *D. tarapacana* Phil., *Panicum adscendes* Kunth, *P. ciliare* Retz., *P. sanguinale* L. var. *ciliare* (Retz.) Vasey

Herb.
Departmental distribution: Alto Paraguay, Alto Paraná, Amambay, Caaguázú, Canindeyú, Central, Concepción, Cordillera, Guairá, Itapúa, Misiones, Paraguarí, Presidente Hayes, San Pedro.
Voucher: F. Mereles et al. 10069 (FCQ).

**Digitaria horizontalis** Willd., Enum. Pl. 92. 1809.

Syn.: *Panicum horizontalis* (Willd.) G.Mey., *P. oxyanthum* Steud., *P. sanguinale* L. var. *horizontale* (Willd.) Schweinf.

Herb.
Departmental distribution: Alto Paraguay, Amambay, Boquerón, Canindeyú, Central, Concepción, Cordillera, Guairá, Itapúa, Misiones, Presidente Hayes, San Pedro.
Voucher: W.J. Hahn 2076 (MO, PY).

**Digitaria insularis** (L.) Fedde, Bot. Jahresber. 31(1): 778. 1904.

Syn.: *Acicarpa sacchariflora* Raddi, nom. illeg., *Andropogon insulare* L., *Digitaria insularis* (L.) Mez ex Ekman, comb. superfl., *Panicum insulare* (L.) G.Mey., *P. insulare* var. *typicum* Hack., nom. inval., *P. lanatum* Rottb., nom. superfl., *P. leucophaeum* Kunth, *Milium villosum* Sw., nom. superfl., *Trichachne insularis* (L.) Nees, *Tricholaena insularis* (L.) Griseb., *Syntherisma insularis* (L.) Millsp., *Valota insularis* (L.) Chase.

Herb.
Departmental distribution: Alto Paraguay, Alto Paraná, Amambay, Boquerón, Caaguazú, Central, Cordillera, Guairá, Misiones, Paraguarí, Presidente Hayes, San Pedro.
Voucher: F. Mereles & S. Soria 9989 (BM, FCQ, G).

**Echinochloa colona** (L.) Link., Hort. Berol. 2: 209. 1833.

Syn.: *Echinochloa colona* (L.) Link f. *zonalis* (Guss.) Wiegand, *Panicum colonum* L., *P. colonum* f. *maculatum* Arechav., *Oplismenus colonus* (L.) Kunth, *O. muticus* Phil.

Herb.
Departmental distribution: Alto Paraguay, Amambay, Central, Concepción, Cordillera, Guairá, Itapúa, Misiones, Presidente Hayes.
Voucher: F. Mereles et al. 10165 (BM, FCQ, G).
**Echinochloa crus-galli** (L.) P. Beauv. var. *crus-galli*, Ess. Agrostogr. 161 (53, 169). 1812.

Syn.: *Panicum crus-galli* L.

Herb. Introduced.
Departmental distribution: Alto Paraguay, Central, Cordillera, Presidente Hayes.
Voucher: *F. Mereles & L. Ramella 2925* (FCQ).

**Echinochloa crus-pavonis** (Kunth) Schult., Mant. 2: 269. 1824.

Syn.: *Echinochloa crus-galli* (L.) P. Beauv. var. *crus-pavonis* (Kunth) Hitchc., *Oplismenus crus-pavonis* Kunth, *Panicum crus-galli* L. var. *sabulicola* (Nees) Trin.

Herb. Introduced.
Departmental distribution: Alto Paraguay, Alto Paraná, Boquerón, Central, Concepción, Cordillera, Guairá, Itapúa, Misiones, Presidente Hayes.
Voucher: *F. Mereles & J. De Egea 10135* (BM, FCQ, G).

**Echinochloa oryzoides** (Ard.) Fritsch, Verh. K.K. Zool.-Bot. Ges. Wien 41: 742. 1891.

Syn.: *Panicum crus-galli* L. var. *grandiflorum* Döll, *P. oryzoides* Ard.

Herb. Introduced.
Departmental distribution: Cordillera.
Voucher: *E. Lurvey 60* (Zuloaga et al. 1994).

**Echinochloa polystachya** (Kunth) Hitchc. var. *spectabilis* (Nees) Mart.Crov., Revista Argent. Agron. 9: 318. 1942.

Syn.: *Echinochloa spectabilis* (Nees ex Trin.) Link, *Panicum spectabile* Nees ex Trin., *Pseudoechinolaena spectabilis* (Nees ex Trin.) Herter

Herb.
Departmental distribution: Alto Paraguay, Central, Cordillera, Guairá, Ñeembucú, Presidente Hayes.
Voucher: *J. De Egea et al. 1311* (FCQ).
Eleusine indica (L.) Gaertn., Fruct. Sem. Pl. 1: 8. 1788.

Syn.: Cynosurus indicus L.

Herb. Introduced.
Departmental distribution: Amambay, Caazapá, Central, Guairá, Itapúa, Misiones.
Voucher: F. Mereles et al. 10162 (FCQ, G).

Eleusine tristachya (Lam.) Lam., Tabl. Encycl. 1(2): 203. 1792.

Syn.: Cynosurus tristachyos Lam., Eleusine indica (L.) Gaertn. var. condensata Döll, Eleusine oligostachya Link, E. tristachya (Lam.) Kunth, comb. superfl.

Herb.
Departmental distribution: Alto Paraná, Central, Guairá, Itapúa, Misiones, Ñeembucú, Misiones, Paraguari, Presidente Hayes, San Pedro.
Voucher: J. De Egea et al. 1292 (FCQ).

Eragrostis airoides Nees, Fl. Bras. Enum. Pl. 2(1): 509. 1829.

Syn.: Agrosticula brasiliensis (Raddi) Herter, Aira brasiensis Raddi, Airopsis millegrina Griseb., Eragrostis triflora Ekman, Poa airoides (Nees) Kunth, hom. illeg., Sporobolus brasiliensis (Raddi) Hack.

Herb.
Departmental distribution: Alto Paraná, Amambay, Central, Guairá, Itapúa, Misiones, Paraguari, Presidente Hayes, San Pedro.
Voucher: G. Céspedes et al. 440 (FCQ).

Eragrostis bahiensis Schrad., Mant. 2: 318. 1824.

Syn.: Eragrostis atrovirens auct. non (Desf.) Trin., E. bahiensis Schrad. ex Schult. var. contracta Döll, E. bahiensis var. laxiuscula Döll, E. bahiensis f. riparia Burkart, E. blepharophylla Jedwabn., E. expansa Link, E. firma Trin., E. macra Jedwabn., E. microstachya (Link) Link, E. pilosa (L.) P.Beauv. var. bahiensis (Schrad. ex Schult.) Kuntze, E. psammodes Trin., E. psammodes var. microstachya (Link) Döll, E. squamata auct. non (Lam.) Steud., Poa expansa (Link) Kunth, P. microstachya Link, P. psammodes (Trin.) Kunth.
Herb.
Departmental distribution: Alto Paraná, Amambay, Caaguazú, Central, Concepción, Cordillera, Guairá, Misiones, Paraguarí, Presidente Hayes, San Pedro.
Voucher: G. Céspedes et al. 448 (FCQ).

*Eragrostis lugens* Nees, Fl. Bras. Enum. Pl. 2(1): 507. 1829.

Syn.: *Eragrostis flaccida* Lindm., *E. lugens* Nees ssp. *flaccida* (Lindm.) Hack., *E. lugens* var. *glaibrata* Döll, *E. lugens f. pallida* Hack., *E. pilosa* (L.) P.Beauv. var. *lugens* (Nees) Griseb., *Poa lugens* (Nees) Kunth

Herb.
Departmental distribution: Alto Paraguay, Boquerón, Central, Concepción, Cordillera, Guairá, Ñeembucú, Paraguarí, Presidente Hayes.
Voucher: G. Céspedes 437 (FCQ).

*Eragrostis pilosa* (L.) P.Beauv., Ess. Agrostogr. 71 (162, 175). 1812.

Syn.: *Eragrostis damiensiana* (Bonnet) Thell., *E. damiensiana var. condensata* (Hack.) Thell., *E. gracilis* Schrad., *E. multicaulis* Steud., *E. peregrina* Wiegand, *E. pilosa* (L.) P.Beauv. var. *condensata* Hack., *E. pilosa ssp. damiensiana* (Bonnet) Thell., *E. pilosa var. damiensiana* Bonnet, *E. verticillata* (Cav.) P.Beauv., *Poa pilosa* L.

Herb. Introduced.
Departmental distribution: Alto Paraguay, Central, Cordillera.
Voucher: M. Ortíz 2 (FCQ).

*Hymenachne amplexicaulis* (Rudge) Nees, Fl. Bras. Enum. Pl. 2(1): 276. 1829.

Syn.: *Agrostis monostachya* Poir., *Panicum amplexicaule* Rudge

Herb.
Departmental distribution: Alto Paraguay, Alto Paraná, Amambay, Boquerón, Caaguazú, Caazapá, Central, Concepción, Cordillera, Guairá, Itapúa, Misiones, Ñeembucú, Paraguari, Presidente Hayes, San Pedro.
Voucher: F. Mereles et al. 10180 (FCQ).
**Leptochloa virgata** (L.) P.Beauv., Ess. Agrostogr. 71 (161, 166). 1812.

Syn.: *Cynodon domingense* (Jacq.) Raspail, *Cynodon virgatus* (L.) Raspail, *Cynosurus dominguensis* Jacq., *Cynosurus virgatus* L., *Eleusine barbata* Desv., *E. domingensis* (Jacq.) Pers., *E. unioloides* Willd. ex Steud., nom. inval., *E. virgata* (L.) Pers., *Diplachne domingensis* (Jacq.) Chapm., *Festuca domingensis* (Jacq.) Lam., *F. virgata* (L.) Lam., *Leptochloa barbata* (Desv.) Parodi ex Nicora, *Leptochloa domingensis* (Jacq.) Trin., *Leptochloa mutica* Steud., *Leptochloa procura* Nees, *Leptochloa virgata* (Jacq.) Chapm. var. *domingensis* (Jacq.) Link ex Griseb., *Leptochloa virgata* (L.) P.Beauv. var. *mutica* (Steud.) Döll, *Leptochloa virgata* (L.) P.Beauv. var. *puberula* Hack, *Lep-tostachys domingensis* (Jacq.) G.Mey. *Rabdochloa domingensis* (Jacq.) P.Beauv.

Herb.

departmental distribution: Alto Paraguay, Alto Paraná, Amambay, Caaguazú, Caazapá, Central, Concepción, Cordillera, Guairá, Itapúa, Misiones, Paraguarí, Presidente Hayes, San Pedro.

Voucher: *D.R. Brunner 1219* (MO, PY).

**Megathyrsus maximus** (Jacq.) B.K.Simon & S.W.L.Jacob var. *maximus*, Austrobailey a 6(3): 572. 2003.

Syn.: *Panicum maximum* Jacq., *Urochloa maxima* (Jacq.) R.D.Webster

Herb. Introduced.

departmental distribution: Alto Paraguay, Alto Paraná, Amambay, Boquerón, Caazapá, Central, Concepción, Cordillera, Guairá, Itapúa, Paraguarí, Presidente Hayes, San Pedro.

Voucher: *R. Degen 1518* (FCQ).

**Melinis repens** (Willd.) Zizka, Biblioth. Bot. 138: 55. 1988.

Syn.: *Rhynchelytrum repens* (Willd.) C.E.Hubb., *R. roseum* (Nees) Stapf & C.E.Hubb., *Saccharum repens* Willd., *Tricholaena repens* (Willd.) Hitchc.

Herb. Introduced.

departmental distribution: Alto Paraguay, Alto Paraná, Amambay, Canindeyú, Central, Concepción, Cordillera, Guairá, Itapúa, Misiones, Ñeembucú, Paraguarí, Presidente Hayes, San Pedro.

Voucher: *J. De Egea et al. 1271* (FCQ).
**Panicum bergii** Arechav. var. *bergii*, Anales Mus. Nac. Montevideo 1: 147. 1894.

Syn.: *Panicum bergii* Arechav. f. *convoluta* R.A.Palacios, *P. burkartii* Zuloaga, *P. pilcomayense* Hack.

Herb.
Departmental distribution: Alto Paraguay, Alto Paraná, Boquerón, Central, Concepción, Misiones, Ñeembucú, Paraguari, Presidente Hayes.
Voucher: *F. Mereles et al. 10085* (FCQ, G).

**Paspalum acuminatum** Raddi, Agrostogr. Bras. 25. 1823.

Syn.: *Paspalum serratum* Hitchc. & Chase

Herb.
Departmental distribution: Amambay, Caazapá, Central, Concepción, Cordillera, Itapúa.
Voucher: *A. Schinini 6282* (CTES,G).

**Paspalum almum** Chase, J. Wash. Acad. Sci. 23(3): 137, f. 1. 1933.

Syn.: *Paspalum hexastachyum* Parodi, *P. ovale* Nees ex Steud. var. *apiculatum* Hack.

Herb.
Departmental distribution: Alto Paraguay, Alto Paraná, Central, Cordillera, Misiones, Ñeembucú, Paraguari, Presidente Hayes.
Voucher: *M. Peña-Chocarro et al. 1669* (FCQ).

**Paspalum chaseanum** Parodi, J. Wash. Acad. Sci. 23: 137. 1933.

Herb.
Departmental distribution: Alto Paraguay, Boquerón.
Voucher: *F. Mereles & R. Degen 5885* (FCQ).

**Paspalum conjugatum** P.J.Bergius, Acta Helv. Phys.-Math. 7: 129 (130; t. 8). 1772.

Syn.: *Paspalum renggeri* Steud.

Herb.
Departmental distribution: Alto Paraná, Amambay, Caaguazú, Caazapá, Canindeyú, Central, Concepción, Cordillera, Guairá, Misiones, Paraguarí, San Pedro.
Voucher: O. Morrone & J. Pensiero 133 (FCQ).

**Paspalum plicatum** Michx., Fl. Bor.-Amer. 1: 45. 1803.

Syn.: *Panicum plicatum* (Michx.) Kunth, *Paspalum lenticulare* Kunth f. *intumescent* (Döll) Killeen, *Paspalum montevidense* Spreng., *Paspalum plicatum* Michx. var. *genuinum* Parodi, nom. inval., *Paspalum plicatum* var. *glabrum* Arechav., *Paspalum plicatum* var. *intumesced* Döll, *Paspalum plicatum* var. *longipilum* Hack., *P. plicatum* ssp. *montevidense* (Spreng.) Roseng., B.R.Arrill. & Izag., *Paspalum plicatum* var. *villosissimum* Pilg., *P. ramosum* Swallen

Herb.
Departmental distribution: Alto Paraguay, Alto Paraná, Amambay, Caaguazú, Central, Concepción, Cordillera, Guairá, Itapúa, Misiones, Ñeembucú, Paraguarí, Presidente Hayes, San Pedro.
Voucher: J. De Egea et al. 1308 (FCQ).

**Paspalum umbrosum** Trin., Mém. Acad. Imp. Sci. St.-Pétersbourg, Sér. 6, Sci. Math. 1: 153. 1834.

Syn.: *Paspalum densiflorum* Döll, *P. maritimum* auct. non Trin., *P. paniculatum* L. ssp. *umbrosum* (Trin.) Roseng., B.R.Arrill. & Izag.

Herb.
Departmental distribution: Alto Paraná, Caaguazú, Caazapá, Central, Cordillera, Guairá, Itapúa, Misiones, Paraguarí, San Pedro.
Voucher: F. Mereles et al. 10093 (FCQ).

**Paspalum urvillei** Steud., Syn. Pl. Glumac. 1(1): 24. 1853.

Syn.: *Paspalum larrañagai* Arechav.

Herb.
Departmental distribution: Alto Paraná, Amambay, Caaguazú, Caazapá, Canindeyú, Central, Concepción, Cordillera, Guairá, Itapúa, Misiones, Ñeembucú, Paraguarí, San Pedro.
Voucher: E. Lurvey 72 (Zuloaga et al. 2014).
**Paspalum wrightii** Hitchc. & Chase, Contr. U.S. Natl. Herb. 18: 310. 1917.

Syn.: *Paspalum hydrophilum* Henrard, *P. plicatum* Michx. var. *multinode* Hack, *P. virgatum* L. var. *subplicatum* Hack

Herb.
Departmental distribution: Alto Paraguay, Central, Ñeembucú, Presidente Hayes.
Voucher: *J.R. Ramírez 132* (CTES).

**Setaria parviflora** (Poir.) Kerguélen var. *parviflora*, Lejeunia 120: 161. 1987.

Syn.: For full list of synonyms see Pensiero (2003).

Herb.
Departmental distribution: Alto Paraguay, Alto Paraná, Amambay, Caaguazú, Canindeyú, Central, Concepción, Cordillera, Guairá, Itapúa, Paraguarí, Presidente Hayes, San Pedro.
Voucher: *F. Mereles et al. 10100* (FCQ).

**Setaria scandens** Schrad., Mant. 2: 279. 1824.

Syn.: *Chaetochloa scandens* (Schrad.) Scribn., *Panicum scandens* (Schrad.) Trin., *P. scandens* var. *grandiflorum* Döll, *Panicum scandens* var. *longiseta* Döll, *P. scandens* var. *vulgare* Döll, *Setaria scandens* Schrad. ex Schult. var. *sphacelata* Hack., *S. trinii* Kunth.

Herb.
Departmental distribution: Amambay, Guairá.
Voucher: *E. Hassler & T. Rojas 10141* (Zuloaga et al. 2014).

**Setaria tenax** (Rich.) Desv., Opusc. Sci. Phys. Nat. 78. 1831.

Syn.: *Panicum tenax* A.Rich., *Setaria sphaerocarpa* (Salzm.) C.E.Hubb.

Herb.
Departmental distribution: Central, Concepción, Cordillera, Paraguari.
Voucher: *E.M. Zardini & C. Velázquez 26273* (FCQ, MO).
Sorghum halepense (L.) Pers. var. halepense, Syn. Pl. 1: 101. 1805.

Syn.: Andropogon halepensis (L.) Brot., A. sorghum (L.) Brot. var. halepensis (L.) Hack., Holcus halepensis L., Sorghum halepense (L.) Pers. var. genuinum Hack., nom. inval.

Herb. Introduced.
Departmental distribution: Alto Paraná, Boquerón, Central, Itapúa.
Voucher: F. Mereles et al. 10084 (FCQ).

Sporobolus pyramidatus (Lam.) Hitchc., Man. Grasses W. Ind. 84. 1936.

Syn.: Agrostis pyramidata Lam., Sporobolus argutus (Nees) Kunth, S. argutus f. purpurascens Hack., S. argutus var. tuberculatus (Hack.) Hack., S. tuberculatus Hack., Vilfa arguta Nees

Herb.
Departmental distribution: Alto Paraguay, Boquerón, Paraguarí, Presidente Hayes.
Voucher: F. Mereles & S. Soria 9970 (BM, CTES, FCQ, G).

Stapsochloa elata (Desv.) P.M.Peterson, Taxon 64: 460. 2015.

Syn.: Andropogon barbatus L., A polydactylon L., nom. illeg., Chloris barbata (L.) Nash, hom. illeg., C. dandyana C.D.Adams, C. elata Desv., C. polydactyla (L.) Sw., C. polydactyla f. pauciradiata Kurtz

Herb.
Departmental distribution: Alto Paraguay, Alto Paraná, Amambay, Boquerón, Central, Concepción, Cordillera, Guairá, Itapúa, Misiones, Paraguari, Presidente Hayes.
Voucher: F. Mereles & S. Soria 9973 (BM, FCQ, G).

*Tragus australianus* S.T.Blake, Univ. Queensl. Papers, Dept. Biol. 1 (18): 12. 1941.

Herb. Introduced.
Departmental distribution: Boquerón.
Voucher: F. Mereles & S. Soria 9942 (FCQ, G).

Trichloris crinita (Lag.) Parodi, Revista Argent. Agron. 14: 63. 1947.

Syn.: Chloris crinita Lag., Chloris mendocina Phil., Chloropsis blanchardiana (E.Fourn. ex Scribn.) Kuntze, Chloropsis crinita (Lag.) Kuntze, Chloropsis mendocina (Phil.)
Kuntze, *Trichloris blanchardiana* E.Fourn. ex Scribn., *T. crinita* (Lag.) Parodi var. *triflora* Parodi, *T. crinita* var. *typica* Parodi, nom. inval., *T. mendocina* (Phil.) Kurtz, *T. mendocina* f. *blanchardiana* (E.Fourn. ex Scribn.) Kurtz, *T. mendocina* (Phil.) Kurtz ex Seckt, hom. illeg.

Herb.
Departmental distribution: Alto Paraguay, Boquerón.
Voucher: *F. Mereles & S. Soria 9976* (FCQ).

*Urochloa brizantha* (Hochst. ex A.Rich.) R.D.Webster, Austral. Paniceae (Poaceae) 233. 1987.

Syn.: *Brachiaria brizantha* (Hochst. ex A.Rich.) Stapf, *Panicum brizanthum* Hochst. ex A.Rich.

Herb. Introduced.
Departmental distribution: Alto Paraguay, Alto Paraná, Amambay, Canindeyú, Central, San Pedro.
Voucher: *F. Mereles et al. 10075* (FCQ).

*Urochloa decumbens* (Stapf) R.D.Webster, Austral. Paniceae (Poaceae) 234. 1987.

Herb. Introduced.
Departmental distribution: Cordillera, San Pedro.
Voucher: *O. Morrone & J. Pensiero 371* (FCQ).

*Urochloa paucispicata* (Morong) Morrone & Zuloaga, Darwiniana 31: 95. 1992.

Syn.: *Acroceras paucispicata* (Morong) Henrard, *Brachiaria paucispicata* (Morong) Clayton, *Panicum paucispicatum* Morong

Herb.
Departmental distribution: Alto Paraguay, Boquerón, Central, Concepción, Cordillera, Presidente Hayes.
Voucher: *F. Mereles & S. Soria 9943* (BM, CTES, FCQ, G).

*Urochloa plantaginea* (Link.) R.D.Webster, Syst. Bot. 13(4): 607. 1988.

Syn.: *Brachiaria plantaginea* (Link) Hitchc., *Panicum plantagineum* Link
Herb.
Departmental distribution: Alto Paraguay, Central, Concepción, Cordillera, Guairá, San Pedro.
Voucher: J. De Egea et al. 1291 (FCQ).

POLYGONACEAE

*Polygonum acuminatum* Kunth, Nov. Gen. Sp. 2: 178. 1817.

Syn.: *Persicaria acuminata* (Kunth) M.Gómez, *Polygonum acuminatum* Kunth var. *glabrescens* Meisn., *Polygonum acuminatum* var. *microstemon* Mart. ex Meisn., *Polygonum acuminatum* var. *setigerum* (Wedd.) Meisn., *Polygonum alfredi* Pilg., *Polygonum bettfreundianum* Lindau, *Polygonum floribundum* Wedd., *Polygonum setigerum* Wedd.

Herb.
Departmental distribution: Alto Paraguay, Alto Paraná, Amambay, Boquerón, Caaguazú, Caazapá, Canindeyú, Central, Concepción, Cordillera, Guairá, Itapúa, Misiones, Ñeembucú, Paraguari, Presidente Hayes, San Pedro.
Voucher: A. Schinini & R. Palacios 25915 (FCQ).

*Polygonum aviculare* L., Sp. Pl. 1: 362 (-363). 1753.

Syn.: *Polygonum arenastrum* Boreau, *P. berteroi* Phil., *P. striatum* K.Koch, *P. uruguense* H.Gross

Herb. Introduced.
Departmental distribution: Presidente Hayes.
Voucher: T. Rojas 409 (Cialdella and Brandbyge 2001).

*Polygonum convolvulus* L., Sp. Pl. 1: 364. 1753.

Syn.: *Bilderdykia convolvulus* (L.) Dumort., *Fallopia convolvulus* (L.) A.Löve, *Tiniaria convolvulus* (L.) Webb & Moq.

Herb. Introduced.
Departmental distribution: Cordillera, Guairá, Itapúa.
Voucher: E. Lurvey 17 (CTES).
**Polygonum hispidum** Kunth, Nov. Gen. Sp. (quarto ed.) 2: 178. 1817.

Syn.: *Persicaria hispida* (Kunth) M.Gómez

Herb.

Departmental distribution: Alto Paraguay, Boquerón, Central, Cordillera, Ñeembucú, Presidente Hayes.

Voucher: *F. Mereles et al. 10117* (FCQ, G).

**Polygonum hydropiperoides** Michx. var. *setaceum* (Baldwin) Gleason, Phytologia 4(1): 23. 1952.

Syn.: *Polygonum hydropiperoides* Michx. var. *virgatum* (Cham. & Schltdl.) Meisn., *P. setaceum* Baldwin, *P. virgatum* Cham. & Schltdl.

Herb.

Departmental distribution: Caazapá, Central, Cordillera, Guairá, Itapúa, Misiones, Ñeembucú, Paraguarí, Presidente Hayes, San Pedro.

Voucher: *J. De Egea et al. 691* (BM, FCQ).

**Polygonum lapathifolium** L., Sp. Pl. 1: 360. 1753.

Syn.: *Persicaria lapathifolia* (L.) Delarbre, *Polygonum ferrugineum* Wedd. var. *patagonicum* (Speg.) Macloskie, *Polygonum lanigerum* R.Br., *Polygonum persicaria* L. var. *vernicosum* Cham. & Schltdl., *Polygonum spectabile* Mart. ex Meisn. var. *patagonica* Speg., *Polygonum utriculatum* J.Remy

Herb. Introduced.

Departmental distribution: Concepción, Presidente Hayes.

Voucher: *F. Mereles 1387* (FCQ).

**Polygonum meisnerianum** Cham. & Schltdl., Linnaea 3(1): 40–42. 1828.

Syn.: *Persicaria meisneriana* (Cham. & Schltdl.) M.Gómez, *Polygonum beyrichianum* Cham. & Schltdl., *Polygonum chamissoeanum* Wedd., *Polygonum meisnerianum* Cham. & Schltdl. var. *beyrichianum* (Cham. & Schltdl.) Meisn., *Polygonum meisnerianum* var. *setosum* Chodat & Hassl.

Herb.
Juana De Egea et al. / PhytoKeys 73: 13–92 (2016)

Departmental distribution: Alto Paraná, Amambay, Caazapá, Central, Cordillera, Guairá, Itapúa, Misiones, Ñeembucú, Paraguarí, San Pedro.
Voucher: R. Degen 9 (FCQ).

*Polygonum punctatum* Elliot, Sketch Bot. S. Carolina 1(5): 455–456. 1821.

Syn.: *Persicaria punctata* (Elliot) Small, *Polygonum acre* Kunth, hom. illeg., *Polygonum epilobioides* Wedd., *Polygonum hydropiperoides* Pursh, hom. illeg.

Herb.
Departmental distribution: Alto Paraguay, Alto Paraná, Amambay, Caaguazú, Caazapá, Canindeyú, Central, Concepción, Cordillera, Guairá, Itapúa, Misiones, Ñeembucú, Paraguarí, Presidente Hayes, San Pedro.
Voucher: F. Mereles et al. 10019 (BM, CTES, FCQ, G).

*Rumex obovatus* Danser, Ned. Kruidk. Arch. 1920: 241. 1921.

Syn.: *Rumex paraguayensis* auct. non D.Parodi

Herb.
Departmental distribution: Alto Paraná, Central, Guairá, Presidente Hayes.
Voucher: F. Mereles et al. 10092 (FCQ, G).

*Rumex paraguayensis* D.Parodi, Anales Soc. Ci. Argent. 5: 160. 1878.

Herb.
Departmental distribution: Alto Paraguay, Boquerón, Central, Cordillera, Misiones, Presidente Hayes.
Voucher: R. Spichiger et al. RS2209 (FCQ).

*Rumex pulcher* L., Sp. Pl. 1: 336. 1753.

Herb. Introduced.
Departmental distribution: Alto Paraná, Central, Cordillera, Misiones.
Voucher: I. Basualdo 1164 (FCQ).
PORTULACACEAE

*Portulaca cryptopetala* Speg., Anales Soc. Ci. Argent. 82: 217. 1916.

Syn.: *Portulaca cryptopetala* Speg. var. *diversifolia* (Poelln.) D.Legrand, *P. cryptopetala* var. *legrandii* (Poelln.) D.Legrand, *P. cryptopetala* f. *phenopetala* Speg., *P. diversifolia* D.Legrand, nom. illeg., *P. diversifolia* Poelln. var. *legrandii* (Poelln.) D.Legrand *P. legrandii* Poelln.

Herb.

Departmental distribution: Alto Paraguay, Central, Ñeembucú, Paraguarí, Presidente Hayes, San Pedro.

Voucher: *F. Mereles 10125 (FCQ)*.

*Portulaca oleracea* L., Sp. Pl. 1: 445. 1753.

Syn.: *Portulaca cryptopetala* Speg. var. *poellnitziana* (D.Legrand) D.Legrand, *P. marginata* Kunth, *P. neglecta* Mack. & Bush, *P. oleracea* L. var. *granulato-stellulata* Poelln., *P. oleracea* var. *macrantha* Eggers, *P. oleracea* var. *micrantha* Eggers, *P. oleracea* var. *parviflora* (Haw.) Griseb., *P. oleracea* var. *silvestris* (Montandon) Thell., *P. poellnitziana* D.Legrand, *P. retusa* Engelm.

Herb. Introduced.

Departmental distribution: Alto Paraguay, Boquerón, Central, Paraguarí, Presidente Hayes, San Pedro.

Voucher: *F. Mereles & S. Soria 9994 (FCQ)*.

RUBIACEAE

*Borreria eryngioides* Cham. & Schltdl. var. *affinis* (DC.) K.Schum., Fl. Bras. 6(6): 48. 1888.

Syn.: *Borreria affinis* DC., *B. assurgens* (Ruiz & Pav.) Griseb., *B. assurgens* Hassl. var. *longisepala* Hassl., *B. chacoensis* Hassl., *B. chacoensis* var. *glabrata* Hassl., *B. eryngioides* Cham. & Schltdl. var. *latifolia* Hassl., *B. parviflora* G.Mey. var. *scabra* Griseb.

Herb or subshrub.

Departmental distribution: Alto Paraguay, Alto Paraná, Caazapá, Central, Guairá, Presidente Hayes.

Voucher: *F. Mereles & S. Soria 10204 (FCQ, G)*.
**Borreria verticillata** (L.) G.Mey., Prim. Fl. Esseq. 83. 1818.

Syn.: *Borreria capitata* (Ruiz & Pav.) DC. f. *ferruginea* auct. non (A.St.-Hil.) Steyerm., *Spermacoce verticillata* L.

Herb or subshrub.
Departmental distribution: Alto Paraná, Amambay, Caaguazú, Caazapá, Canindeyú, Central, Concepción, Cordillera, Guairá, Misiones, Ñeembucú, Paraguarí, Presidente Hayes, San Pedro.
Voucher: *J. De Egea et al. 1242* (BM, FCQ).

**Mitracarpus megapotamicus** (Spreng.) Kuntze, Publ. Field Mus. Nat. Hist., Bot. Ser. 7: 331. 1931.

Syn.: *Mitracarpium cuspidatum* DC., *Mitracarpus megapotamicus* (Spreng.) Standl., comb. superfl., *Mitracarpium peladilla* Griseb., *Mitracarpus sellowianum* Cham. & Schltdl., *Spermacoce megapotamica* Spreng.

Herb.
Departmental distribution: Alto Paraguay, Amambay, Boquerón, Caaguazú, Caazapá, Central, Concepción, Guairá, Misiones, Paraguarí, Presidente Hayes.
Voucher: *F. Mereles et al. 10021* (FCQ).

**Mitracarpus villosus** (Sw.) DC., Prodr. 4: 572. 1830.

Syn.: *Mitracarpus hirtus* auct. non (L.) DC., *Spermacoce hirta* auct. non L., *S. villosa* Sw.

Herb.
Departmental distribution: Caaguazú, Caazapá, Canindeyú, Central, Paraguarí.
Voucher: *F. Mereles et al. 10103* (FCQ).

**Oldenlandia lancifolia** (Schumach.) DC., Prodr. 4: 425. 1830.

Syn.: *Hedyotis lancifolia* Schumach.

Herb. Introduced.
Departmental distribution: Central, Cordillera.
Voucher: *F. Mereles 10120* (FCQ).
Richardia brasiliensis Gomes, Mem. sobre Ipecac. 31. 1801.

Syn.: Richardsonia brasiliensis (Gomes) Hayne, Richardia pilosa auct. non Ruiz & Pav., Richardsonia rosea A.St.-Hil., Richardia rosea (A.St.-Hil.) Schult.f., Richardia scabra auct. non L., Richardsonia brasiliensis (Gomes) Hayne var. dubia Beauverd & Felipp., Richardsonia scabra auct. non (L.) A.St.-Hil.

Herb.
Departmental distribution: Alto Paraguay, Alto Paraná, Amambay, Boquerón, Caaguazú, Caazapá, Canindeyú, Central, Concepción, Cordillera, Guairá, Itapúa, Ñeembucú, Paraguarí, Presidente Hayes, San Pedro.
Voucher: J. De Egea et al. 1234 (FCQ).

Staelia virgata (Link ex Roem. & Schult.) K.Schum. var. virgata, Fl. Bras. 6(6): 76. 1888.

Syn.: Borreria finitima S.Moore, Mitracarpus virgatus (Link ex Roem. & Schult.) Cham. & Schltld., Spermacoce virgata Link ex Roem. & Schult., Staelia caespitosa Griseb.

Herb.
Departmental distribution: Alto Paraguay, Concepción, Cordillera, Misiones, Ñeembucú, Paraguarí, Presidente Hayes.
Voucher: F. Mereles & J. De Egea 10152 (FCQ, G).

SOLANACEAE

Nicotiana glauca Graham, Edinburgh New Philos. J. 5: 175. 1828.

Syn.: Acnistus virgatus Griseb., Nicotiana glauca Graham var. angustifolia Comes, Nicotiana glauca var. decurrens Comes, Nicotiana glauca var. grandiflora Comes, Nicotiana glauca f. lateritia Lillo, Nicotiana glauca var. typica Millán, nom. inval., Nicotidendron glauca (Graham) Griseb., Siphaulax glabra Raf.

Shrub or subshrub.
Departmental distribution: Alto Paraguay, Boquerón, Central, Cordillera, Ñeembucú, Paraguarí.
Voucher: F. Mereles et al. 10156 (BM, FCQ, G).
**Nicotiana longiflora** Cav., Descr. Pl. 106. 1802.

Syn.: *Nicotiana acuta* Griseb., *N. acutiflora* A.St.-Hil., *N. longiflora* Cav. var. *acutiflora* (A.St.-Hil.) Comes, *N. longiflora* var. *breviflora* Comes, nom. inval., *N. longiflora* var. *grandifolia* Morong

Herb.

Departmental distribution: Boquerón, Central, Concepción, Cordillera, Paraguarí, Presidente Hayes, San Pedro.

Voucher: *F. Mereles et al. 10055* (FCQ).

**Physalis angulata** L., Sp. Pl. 1: 183. 1753.

Herb.

Departmental distribution: Alto Paraguay, Amambay, Boquerón, Guairá, Presidente Hayes, San Pedro.

Voucher: *J. De Egea et al. 1319* (BM, FCQ).

**Solanum americanum** Mill., Gard. Dict. (ed. 8) no. 5. 1768.

Syn.: *Solanum adventitium* Polg., *S. americanum* Mill. var. *nodiflorum* (Jacq.) Edmonds, *S. sciaphilum* Bitter, *S. curtipes* Bitter, *S. nigrum* L. var. *americanum* (Mill.) O.E.Schulz, *S. nigrum* var. *virginicum* L., *S. nodiflorum* Jacq., *S. nodiflorum* var. *acuminatum* Chodat, *S. nodiflorum* var. *micropylum* Hassl., *S. nodiflorum* var. *petiolastrum* Dunal, *S. nodiflorum* var. *sapucayense* Chodat, *S. oleraceum* Dunal, *S. tenellum* Bitter.

Herb or subshrub.

Departmental distribution: Alto Paraguay, Alto Paraná, Amambay, Boquerón, Caaguazú, Caazapá, Canindeyú, Central, Concepción, Cordillera, Guairá, Itapúa, Misiones, Ñeembucú, Paraguarí, Presidente Hayes, San Pedro.

Voucher: *J. De Egea et al. 1320* (BM, FCQ).

**Solanum chacoense** Bitter, Repert. Spec. Nov. Regni Veg. 11: 18. 1912.

Syn.: *Solanum arnezii* Cárdenas, *S. bitteri* Hassl., *S. boergeri* Bukasov, *S. caipipendense* Cárdenas, *S. calvescens* Bitter, *S. chacoense* var. *angustisectum* (Hassl.) Hassl., *S. chacoense* f. *caipipendense* (Cárdenas) Correll, *S. chacoense* f. *gibberulosum* (Juz. & Bukasov) Correll, *S. chacoense* f. *glabrescens* (Hassl.) Hassl., *S. chacoense* var. *latisectum* (Hassl.) Hassl., *S. chacoense* subsp. *muelleri* (Bitter) Hawkes, *S. chacoense* f. *plurijugum* Hassl., *S. chacoense* f. *puberulum* Hassl., *S. chacoense* subsp. *subtilius* (Bitter) Hawkes,
**Solanum commersonii** var. *glabriusculum* J.Rémy, *S. cuervoanum* Cárdenas, *S. dolichostigma* Buk. ex Lechn., *S. emmeae* Juz. & Bukasov, *S. garciae* Juz. & Bukasov, *S. guaraniticum* Hassl., *S. guaraniticum* var. *angustisectum* Hassl., *S. guaraniticum* f. *glabrescens* Hassl., *S. guaraniticum* var. *latisectum* Hassl., *S. horovitzii* Bukasov, *S. horovitzii* var. *glabristylum* Hawkes, *S. horovitzii* var. *multijugum* Hawkes, *S. jamesii* var. *grandifrons* Bitter, *S. jujuyense* Hawkes, *S. knappei* Juz. & Bukasov, *S. laplaticum* Bukasov, *S. limense* Correll, *S. muelleri* Bitter, *S. muelleri* f. *densipilosum* Correll, *S. parodii* Juz. & Bukasov, *S. pseudomaglia* L.Planch., *S. saltense* Hawkes, *S. schickii* Juz. & Bukasov, *S. subtillus* Bitter, *S. tuberosum* subsp. *yanacochense* Ochoa, *S. yanacochoense* (Ochoa) Gorbat., *S. yungasense* Hawkes.

Herb.
Departmental distribution: Boquerón, Central, Concepción, Cordillera, Guairá, Itapúa, Paraguari, Presidente Hayes, San Pedro.
Voucher: *I. Basualdo 270* (FCQ).

**Solanum granulosoleprosum** Dunal, Prodr. 13(1): 115. 1852.

Syn.: *Solanum auriculatum* auct. non Aiton, *S. verbascifolium* f. *eupulverulentum* Hassl., *S. verbascifolium* L. f. *granulosoleprosum* (Dunal) Hassl.

Shrub or tree.
Departmental distribution: Alto Paraguay, Alto Paraná, Amambay, Caaguazú, Caa-zapá, Canindeyú, Central, Concepción, Cordillera, Guairá, Itapúa, Misiones, Ñe-embucú, Paraguari, Presidente Hayes, San Pedro.
Voucher: *J. De Égea et al. 1310* (FCQ).

**Solanum guaraniticum** A.St.-Hil., Mém. Mus. Hist. Nat. 12: 321. 1825.

Syn.: *Solanum bonariense* L. f. *intermedium* Hassl., *S. bonariense* f. *leptophyllum* Chodat, *S. bonariense* f. *lobatum* (Chodat) Hassl., *S. bonariense* var. *paraguariense* (Chodat) Chodat, *S. bonariense* f. *subintegrum* (Hassl.) Chodat, nom. illeg., *S. bonariense* f. *typicum* Hassl., nom. inval., *S. bonariense* var. *villaricense* (Morong) Chodat, *S. fastigiatum* Willd. var. *accularium* Dunal, *S. paraguariense* Chodat, *S. villaricense* Morong, *S. villaricense* f. *lobatum* Hassl., *S. villaricense* var. *paraguariense* (Chodat) Hassl., *S. villaricense* f. *subintegrum* Hassl., *S. villaricense* Hassl., nom. inval. var. *typicum*.

Shrub.
Departmental distribution: Alto Paraná, Caaguazú, Caazapá, Canindeyú, Central, Guairá, Itapúa, Misiones, Paraguari, Presidente Hayes.
Voucher: *F. Mereles et al. 10024* (BM, FCQ, G).
**Solanum palinacanthum** Dunal, Prodr. 13(1): 245. 1852.

Syn.: *Solanum claviceps* Griseb., *S. palinacanthum* Dunal var. *acutilobum* Dunal, *S. palinacanthum* f. *velutinum* Chodat, *S. vexans* S.Moore

Shrub or small tree.
Departmental distribution: Alto Paraguay, Alto Paraná, Amambay, Caaguazú, Caazapá, Canindeyú, Central, Concepción, Cordillera, Guairá, Itapúa, Misiones, Ñeembucú, Paraguarí, Presidente Hayes, San Pedro.
Voucher: *F. Mereles et al. 10014* (BM, FCQ, G).

**Solanum pseudocapsicum** L., Sp. Pl. 1: 184. 1753.

Syn.: *Solanum capsicastrum* Link ex Schauer, *S. capsicastrum* var. *caaguazuense* Chodat, *S. diflorum* Vell., *S. diflorum* var. *angustifolium* Kuntze, *S. ipecacuanha* Chodat var. *calvescens* Chodat, *S. pavimenti* L.B.Sm. & Downs, *S. pseudocapsicum* var. *ambiguum* Hassl., *S. pseudocapsicum* L. f. *calvescens* (Chodat) Hassl., *S. pseudocapsicum* ssp. *diflorum* (Vell.) Hassl., *S. pseudocapsicum* var. *hygrophilum* (Schltldl.) Hassl., *S. pseudocapsicum* var. *normale* Kuntze, *S. pseudocapsicum* var. *parvifolium* Kuntze, *S. pseudocapsicum* f. *pilosum* Kuntze, *S. pseudocapsicum* f. *pilosulum* Hassl., *S. pseudocapsicum* var. *sendtnerianum* Hassl., *S. pseudocapsicum* var. *typicum* Hassl., nom. inval.

Subshrub.
Departmental distribution: Alto Paraguay, Amambay, Caaguazú, Caazapá, Canindeyú, Central, Cordillera, Guairá, Misiones, Ñeembucú, Paraguarí, Presidente Hayes, San Pedro.
Voucher: *J. De Egea et al. 1263* (FCQ).

**Solanum sisymbriifolium** Lam., Tabl. Encycl. 2: 25. 1794.

Syn.: *Solanum balbisii* Dunal, *S. balbisii* var. *bipinnata* Hook., *S. balbisii* var. *oligospermum* Sendtn., *S. balbisii* var. *purpureum* Hook., *S. bipinnatifidum* Larrañaga, *S. decurrens* Balb., *S. sisymbriifolium* f. *albiflorum* Kuntze, *S. sisymbriifolium* Lam. var. *brevilobum* Dunal, *S. sisymbriifolium* var. *heracleifolium* Sendtn., nom. inval., *S. sisymbriifolium* f. *lilacinum* Kuntze, *S. sisymbriifolium* var. *macrocarpum* Kuntze, *S. sisymbriifolium* var. *oligospermum* (Sendtn.) Dunal, *S. sisymbriifolium* var. *purpureiflorum* Dunal, *S. subviscidum* Schrank

Herb or subshrub.
Departmental distribution: Alto Paraguay, Boquerón, Caaguazú, Central, Cordillera, Guairá, Itapúa, Ñeembucú, Paraguarí, Presidente Hayes, San Pedro.
Voucher: *F. Mereles et al. 10015* (FCQ, G).
**Solanum tweedieanum** Hook., Bot. Mag. 62: t.3385. 1835.

Syn.: *Solanum atriplicoides* Herter, *S. meizonanthum* Bitter, *S. physalidicalyx* Bitter, *S. physalidicalyx* var. *integescens* Bitter, *S. physalidicalyx* var. *plurilobulatum* Bitter, *S. sidifolium* Spég.

Herb.
Departmental distribution: Alto Paraguay, Boquerón, Presidente Hayes.
Voucher: *F. Mereles & S. Soria 9992* (FCQ, G, BM, CTES).

**Solanum viarum** Dunal, Prodr. 13(1): 240. 1852.

Syn.: *Solanum chloranthum* DC., hom. illeg., *S. reflexum* auct. non Schrank, *S. viridiflorum* Schltdl.

Shrub.
Departmental distribution: Alto Paraguay, Alto Paraná, Boquerón, Caazapá, Canindeyú, Central, Concepción, Cordillera, Guairá, Ñeembucú, Paraguarí, San Pedro.
Voucher: *F. Mereles & S. Soria 9974* (FCQ).

**TALINACEAE**

**Talinum fruticosum** (L.) Juss., Gen. Pl. 312. 1789.

Syn.: *Portulaca fruticosa* L., *P. racemosa* L., *P. triangularis* Jacq., *Talinum racemosum* (L.) Rohrb., *T. triangulare* (Jacq.) Willd.

Subshrub. Introduced.
Departmental distribution: Alto Paraguay, Boquerón, Cordillera, Paraguarí, Presidente Hayes, San Pedro.
Voucher: *F. Mereles & S. Soria 9963* (BM, CTES, FCQ, G).

**Talinum paniculatum** (Jacq.) Gaertn., Fruct. Sem. Pl. 2: 219. 1791.

Syn.: *Portulaca paniculata* Jacq., *P. patens* L., *Talinum patens* (L.) Willd.

Herb. Introduced.
Departmental distribution: Alto Paraguay, Amambay, Boquerón, Caazapá, Canindeyú, Central, Cordillera, Guairá, Paraguarí, Presidente Hayes, San Pedro.
Voucher: *M. Peña-Chocarro & J. De Egea 2453* (BM, CTES, FCQ, MO).
URTICACEAE

Parietaria debilis G.Forst., Fl. Ins. Austr. 73. 1786.

Syn.: Freirea erecta Phil., F. humifusa Gay, Parietaria debilis G.Forst. var. diffusa Wedd., P. debilis var. gracilis (Lowe) Wedd., P. debilis var. micrantha (Ledeb.) Wedd., P. fernandeziana (Steud.) L.E.Navas, P. gracilis Lowe, P. humifusa (Gay) Blume, P. micrantha Ledeb., Urtica fernandeziana Steud., U. parietariaefolia Bertero ex Steud.

Herb.
Departmental distribution: Alto Paraguay, Alto Paraná, Amambay, Caazapá, Central, Concepción, Cordillera, Guairá, Paraguarí.
Voucher: J. De Egea 1295 (BM, FCQ, G).

VERBENACEAE

Aloysia virgata (Ruiz & Pav.) Pers. var. platyphylla (Briq.) Moldenke, Phytologia 2: 310. 1947.

Syn.: Aloysia naviculata Ravenna, A. virgata (Ruiz & Pav.) Pers. var. elliptica (Briq.) Moldenke, Lippia virgata (Ruiz & Pav.) Steud. var. elliptica Briq., L. virgata var. platyphylla Briq.

Shrub.
Departmental distribution: Alto Paraguay, Alto Paraná, Amambay, Central, Concepción, Cordillera, Guairá, Itapúa, Misiones, Ñeembucú, Paraguarí, Presidente Hayes, San Pedro.
Voucher: F. Mereles 9928 (BM, FCQ, G).

*Glandularia cabrerae* (Moldenke) Botta, Bol. Soc. Argent. Bot. 26: 243. 1990.

Syn.: Verbena cabrerae Moldenke, V. dissecta Willd. ex Spreng. f. alba Moldenke

Herb.
Departmental distribution: Alto Paraguay, Alto Paraná.
Voucher: F. Mereles et al. 10067 (FCQ).

Glandularia tomophylla (Briq.) P.Peralta, Darwiniana 45: 241. 2007.

Syn.: Glandularia spectabilis (Moldenke) Botta, Verbena calliantha Briq., V. calliantha var. microsoma Briq., V. megapotamica Spreng. var. pinnatifolia Kuntze, V. pin-
natiloba (Kuntze) Moldenke, *V. ramboi* Moldenke, *V. spectabilis* Moldenke, *V. storeoclada* Briq., *V. tomophylla* Briq.

Herb.
Departmental distribution: Alto Paraguay, Alto Paraná, Caaguazú, Central, Guairá, Itapúa, Misiones, Ñeembucú, Paraguari.
Voucher: *J. De Egea et al. 1136* (BM, FCQ, G).

**Glandularia tweediana** (Niven ex Hook.) P.Peralta, Ann. Missouri Bot. Gard. 98(3): 400. 2011.

Syn.: *Glandularia incisa* (Hook.) Tronc., *Verbena incisa* Hook., *V. megapotamica* Spreng. var. *truncatula* Briq., *V. megapotamica* var. *tweediana* (Niven ex Hook.) Kuntze, *V. tweediana* Niven ex Hook., *V. tweedieana* var. *arriana* Niven ex Maund.

Herb.
Departmental distribution: Alto Paraguay, Caaguazú, Central, Cordillera, Guairá, Ñeembucú, Paraguari, Presidente Hayes, San Pedro.
Voucher: *J. De Egea et al. 1274* (BM, FCQ).

**Stachytarpheta cayennensis** (Rich.) Vahl, Enum. Pl. 1: 208. 1804.

Syn.: *Stachytarpheta australis* Moldenke, *S. cayennensis* (Rich.) Vahl f. *alba* Moldenke ex Tronc. & Botta, *S. cayennensis* f. *albiflora* Moldenke, *S. cayennensis* var. *candicans* Briq., *S. cayennensis* var. *virescens* Briq., *S. dichotoma* (Ruiz & Pav.) Vahl, *S. maximiliani* Schauer var. *ciliaris* Moldenke, *S. patens* Moldenke, *Verbena cayennensis* Rich., *V. dichotoma* Ruiz & Pav.

Herb or subshrub.
Departmental distribution: Alto Paraguay, Alto Paraná, Amambay, Caaguazú, Caazapá, Canindeyú, Central, Concepción, Cordillera, Guairá, Itapúa, Misiones, Ñeembucú, Paraguari, Presidente Hayes, San Pedro.
Voucher: *J. De Egea et al. 1221* (BM, FCQ).

**Verbena litoralis** Kunth var. *litoralis*, Nov. Gen. Sp. 2: 276, t. 137. 1818.

Syn.: *Verbena affinis* M.Martens & Galeotti, *V. approximata* Briq., *V. bonariensis* L. var. *litoralis* (Kunth) Gillies & Hook. ex Hook., *V. caracasana* Kunth, *V. cordobensis* Briq., *V. integrifolia* Sessé & Moç., *V. integrifolia* f. *albiflora* Chodat, *V. litoralis* Kunth var. *albiflora* Moldenke, *V. litoralis* f. *albiflora* (Moldenke) Moldenke *V. litoralis* f. *angustifolia* Chodat, *V. litoralis* var. *caracasana* (Kunth) Briq., *V. litoralis*
var. *glabrior* Benth., *V. litoralis* var. *leptostychya* Schauer, *V. litoralis* var. *pycnostychya* Schauer, nom. inval., *V. nudiflora* Nutt. ex Turcz.

Herb.
Departmental distribution: Alto Paraná, Amambay, Caaguazú, Caazapá, Canindeyú, Central, Concepción, Cordillera, Guairá, Itapúa, Misiones, Ñeembucú, Paraguari, Presidente Hayes, San Pedro.
Voucher: *F. Mereles et al. 10091* (FCQ, G).

**Verbena montevidensis** Spreng., Syst. Veg. (ed. 16) 2:747. 1825.

Syn.: *Verbena isabellei* Briq., *V. minutiflora* Briq. ex Moldenke, *V. minutiflora* var. *peruviana* Moldenke.

Herb.
Departmental distribution: Alto Paraguay, Caaguazú, Caazapá, Central, Cordillera, Guairá, Itapúa, Misiones, Paraguari, Presidente Hayes.
Voucher: *R. Degen et al. 1729* (FCQ).

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**References**

Bajwa AA (2014) Sustainable weed management in conservation agriculture. Crop Protection 65: 105–113. doi: 10.1016/j.cropro.2014.07.014

Baker HG (1965) Characteristics and modes of origins of weeds. In: Baker GH, Stebbins GL (Eds) The Genetics of Colonizing Species. Academic, New York, 147–172.

Baker HG (1974) The evolution of weeds. Annual Review of Ecology and Systematics 5: 1–24. doi: 10.1146/annurev.es.05.110174.000245

Base de dados nacional de espécies exóticas invasoras I3N Brasil (2016) Instituto Hórus de Desenvolvimento e Conservação Ambiental, Florianópolis, SC. http://i3n.institutohorus.org.br/www [accessed 14.06.2016]
Bertoni GT, Gorham R (1973) The Geography of Paraguay. In: Gorham R (Ed.) Paraguay: Ecological Essays. Academy of the Arts and Sciences of the Americas, Miami, 9–32.
Bruinsma J (2009) The resource outlook to 2050: by how much do land, water and crop yields need to increase by 2050? Paper presented at the FAO Expert Meeting, 24–26 June 2009, Rome on “How to Feed the World in 2050”. Food and Agriculture Organization of the United Nations, Economic and Social Development Department, Rome, 3–6.
Cialdella AM, Brandbyge J (2001) Polygonaceae. Flora del Paraguay 33: 38–39.
Daehler CC (1998) The taxonomic distribution of invasive angiosperm plants: ecological insights and comparison to agricultural weeds. Biological Conservation 84: 167–180. doi: 10.1016/S0006-3207(97)00096-7
De Egea J, Peña-Chocarro M, Espada C, Knapp S (2012) Checklist of vascular plants of the Department of Ñeembucú, Paraguay. PhytoKeys 9: 15–179. doi: 10.3897/phytokeys.9.2279
De Egea J, Mereles F, Céspedes G (2016) Tragus australianus (Poaceae, Cynodonteae), nuevo registro de especie exótica para el Paraguay. Bonplandia 25(1): 73–77.
DGEEC (2015) Compendio Estadístico 2014. Dirección General de Estadística, Encuestas y Censos; Secretaría Técnica de Planificación del Desarrollo Económico y Social; Gobierno Nacional, 49–51.
Ferrari G (2012) Malezas y sus dosis de control. Monsanto Argentina S.A.I.C. 247.
Figueroa JA, Castro SA, Marquet PA, Jaksic FM (2004) Exotic plant invasions to the mediterranean region of Chile: causes, history and impacts. Revista Chilena de Historia Natural 77: 465–483. doi: 10.4067/S0716-078X2004000300006
González Erico E (2007) Suelos del Paraguay. In: Salas-Dueñas D, Facetti JF (Eds) Biodiversidad del Paraguay: una aproximación a sus realidades. Fundación Moisés Bertoni para la Conservación de la Naturaleza, Agencia Internacional de Desarrollo de los Estados Unidos de América (USAID) y el Global Environment Facility, Banco Mundial (GEF/BM), 47–56.
Guglieri-Caporal A, Machado Caporal FJ, Leite Kufner DC, de Matos Alves F (2011) Flora invasora de cultivos de aveia-preta, milho e sorgo em região de cerrado do Estado de Mato Grosso do Sul, Brasil. Bragantia, Campinas 70(2): 247–254.
Heap I (2016) The International Survey of Herbicide Resistant Weeds. http://www.weedscience.org [acceded 16.01.2016]
Hill MO, Roy D, Thompson K (2002) Hemeroby, urbanity and ruderality: bioindicators of disturbance and human impact. Journal of Applied Ecology 39: 708–720. doi: 10.1046/j.1365-2664.2002.00746.x
Kuester A, Conner JK, Culley T, Baucom RS (2014) How weeds emerge: a taxonomic and trait-based examination using United States data. New Phytologist 202: 1055–1068. doi: 10.1111/nph.12698
Lorenzi H (2000) Plantas daninhas do Brasil: terrestres, aquáticas, parasitas e tóxicas (3rd edn). Instituto Plantarum, Nova Odessa, 608 pp.
Lurvey EL (1983) Malezas de algodonales, maizales y otros cultivos anuales. Ministerio de Agricultura y Ganadería, Cuerpo de Paz de los EE.UU., Asunción 203, 11 pp.
Mereles F, Degen R (1994) Contribución al estudio de la flora y vegetación del Chaco Boreal Paraguayo. Rojasiana 2(1): 36–38.
Pott A, Pott VJ, de Souza TW (2006) Plantas daninhas de pastagem na Região dos Cerrados. Embrapa Gado de Corte, Corumbá, 336 pp.

Proyecto Sistema Ambiental del Chaco: suelos del Chaco (1992–1997) Informe Técnico. Dirección de Ordenamiento Ambiental, Sub-Secretaría de Recursos Naturales y Medio Ambiente, Ministerio de Agricultura y Ganadería, Paraguay (DOA-SSERNMA-MAG) e Instituto Federal de Geociencias y Recursos Naturales, Alemania (BGR).

Pyšek P, Richardson DM, Rejmánek M, Webster GL, Williamson M, Kirschner J (2004) Alien plants in checklists and floras: towards better communication between taxonomists and ecologists. Taxon 53(1): 131–143. doi: 10.2307/4135498

Ramella L, Perret P (Eds) (2008–2014) Colección Flora del Paraguay. Conservatoire et Jardin botániques de la Ville de Genève & Missouri Botanical Garden, St Louis.

Rejmánek M, Richardson DM (1996) What attributes make some plant species more invasive? Ecology 77(6): 1655–1661. doi: 10.2307/2265768

Richardson DM, Pyšek P, Rejmánek M, Barbour MG, Panetta FD, West CJ (2000) Naturalization and invasion of alien plants: concepts and definitions. Diversity and Distributions 6: 93–107. doi: 10.1046/j.1472-4642.2000.00083.x

Smith AR, Kreier H, Haufler CH, Korall P, Schneider H, Wolf PG (2006) A classification for extant ferns. Taxon 55: 705–731. doi: 10.2307/25065646

Spichiger R (Ed.) (1987–1989) Colección Flora del Paraguay. Conservatoire et Jardin botániques de la Ville de Genève & Missouri Botanical Garden, St Louis.

Spichiger R, Bocquet G (Eds) (1983–1985) Colección Flora del Paraguay. Conservatoire et Jardin botániques de la Ville de Genève & Missouri Botanical Garden, St Louis.

Spichiger R, Ramella L (Eds) (1990–2002) Colección Flora del Paraguay. Conservatoire et Jardin botániques de la Ville de Genève & Missouri Botanical Garden, St Louis.

Stevens PF (2001) Angiosperm Phylogeny Website. Version 12, July 2012 [continuously updated]. http://www.mobot.org/MOBOT/research/APweb/ [accessed: 14.06.2016]

Thiers B (continuously updated) Index Herbariorum: A global directory of public herbaria and associated staff. New York Botanical Garden’s Virtual Herbarium. http://sweetgum.nybg.org/science/ih/ [accessed: 14.06.2016]

TROPICOS Database (2016) Missouri Botanical Garden. http://www.tropicos.org [accessed: 14.06.2016]

WWF (2014) World Wildlife Fund – El Crecimiento de la Soja: Impactos y Soluciones. WWF International, Gland, Suiza, 22–24.

WWF (2016) World Wildlife Fund – Análisis social, económico y ambiental de la producción de soja y carne en Paraguay. WWF-Paraguay y Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, Federal Republic of Germany. Asunción, Paraguay, 16–18.

Zuloaga FO, Belgrano MJ (Eds) (2015) Catálogo de las Plantas Vasculares del Cono Sur. http://www.darwin.edu.ar/Proyectos/FloraArgentina/FA.htm [accessed: 22.07.2015]

Zuloaga FO, Morrone O, Pensiero JF (2014) Gramineae VI. Flora del Paraguay 45: 338–343.

Zuloaga FO, Morrone O, Rúgolo De Agrasar ZE, Anton AM, Arriaga MO, Cialdella AM (1994) Gramineae V. Flora del Paraguay 23: 148–149.