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Here we report genome size estimations from several endemic or subendemic vascular plant species of Chile that were collected during January–February of 2023, with vouchers stored at CONC, UPOS, MA and MACB herbaria. These reports constitute a significant contribution to the scarce knowledge of genome sizes for the South American flora, which is still poorly known even for endangered and/or restricted endemic species, and evolutionarily isolated lineages. We provide the first genome size estimation for 22 species, 14 genera and 4 families, which are endemic to the “Chilean Winter Rainfall-Valdivian Forests” biodiversity hotspot (Arroyo & al., 2004). This information is indicated in the species name as follows:

- * First estimation for the species.
- ** First estimation for the genus.
- *** First estimation for the family.

FLOW CYTOMETRY

Fresh leaves were analyzed together with different internal standard plants: *Oryza sativa* ‘IR 36’ (2C = 1.00 pg; Bennett & Smith, 1991), *Solanum lycopersicum* ‘Stupické’ (2C = 1.98 pg; Doležel & al., 1992), *Petroselinum crispum* ‘Champion Moss Curled’ (2C = 4.50 pg; Obermayer & al., 2002), *Pisum sativum* ‘Ctirad’ (2C = 9.09 pg; Doležel & al., 1998). We used different isolation buffers for processing the samples: General Purpose Buffer (GPB, Loureiro & al., 2007) supplemented with 3% PVP-40 (Pellicer & al., 2021), Lysis buffer LB01 (Doležel & al., 1989), Galbraith’s buffer (Galbraith & al., 1983), Ebihara’s buffer (Ebihara & al., 2005), and CyStain PI OxProtect buffer (Sysmex). These have been indicated for each specimen. For most of the buffers, we added 1 ml of buffer to the target sample and the internal standard, then chopped together the leaves with a razor blade, added another 1 ml of the buffer, and filtered it through a 30 µm pore size CellTrics filter (Sysmex). Finally, we added 100 µl of propidium iodide (PI, 1 mg/ml; Sigma) and incubated for 10 to 30 min. For the CyStain PI OxProtect (Sysmex) buffer, we followed the same protocol, but with 500 µl of buffer before chopping, then 1 ml after chopping, filtering, and finally adding 500 µl into the filter. After this, the samples were analyzed using a CyFlow Space cytometer (Sysmex) fitted with a Cobolt Samba laser (532 nm). The flow histograms were analyzed using FloMax v.2.9 software (Sysmex). We ran the samples through the cytometer at least three times and stopped after the target sample and the standard had reached at least 800 nuclei per fluorescence peak.

All the information will be uploaded to the Plant DNA C-values Database (Pellicer & Leitch, 2019), and the summary table can be found on GitHub. Pictures of some of the species have been included in Fig. 10.

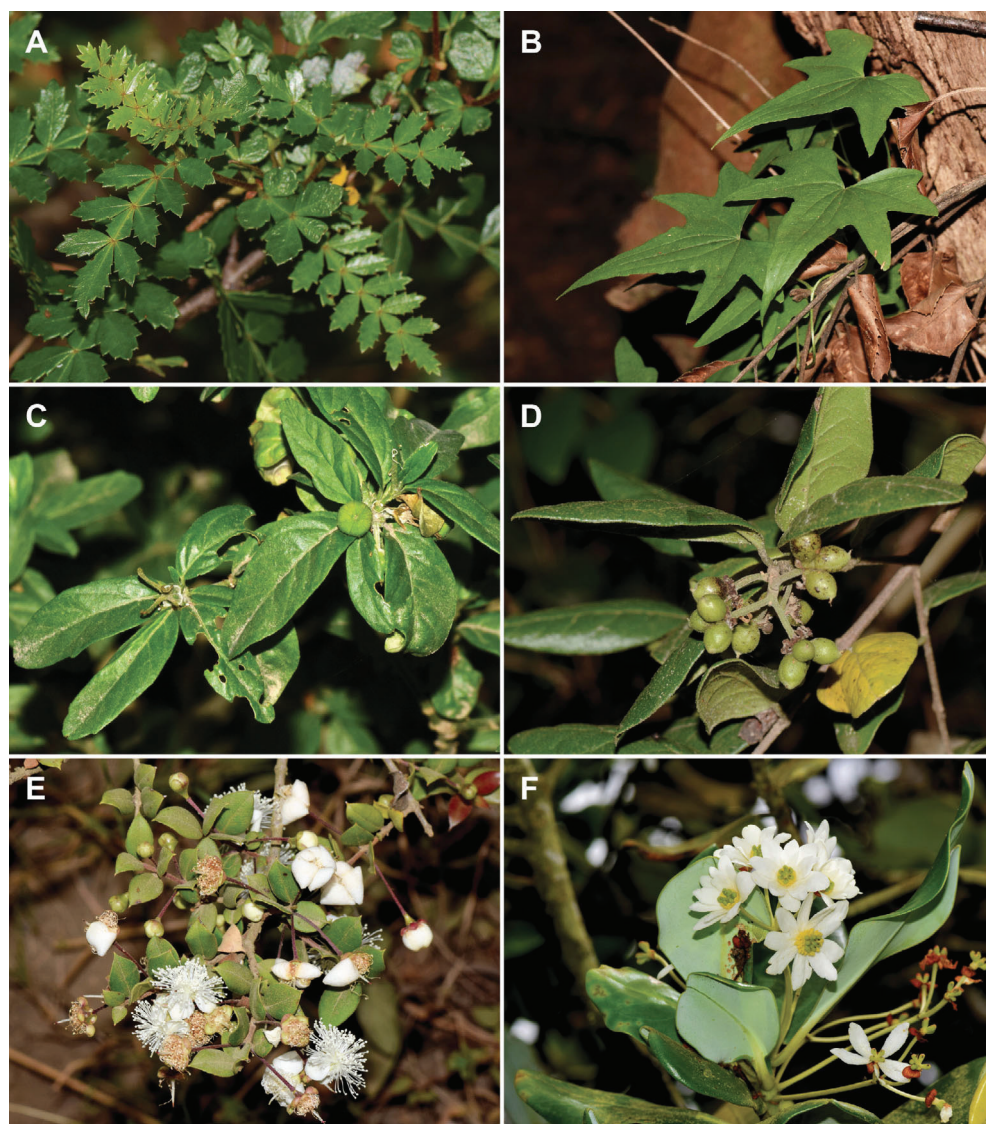


Fig. 10. Representative photos of some of the studied species. **A**, *Weinmannia trichosperma*, Chile, Biobío; **B**, *Dioscorea brachybotrya*, Chile, Biobío; **C**, *Avellanita bustillosii*, Chile, Los Ríos; **D**, *Peumus boldus*, Chile, Biobío; **E**, *Luma apiculata*, Chile, Biobío; **F**, *Drimys winteri*, Chile, Biobío. — Photos by J.I. Márquez-Corro.

AEXTOXICACEAE

****Aextoxicon punctatum* Ruiz & Pav.

$2C = 2.23 \pm 0.022$ pg, $CV = 3.60$ (GPB). [Cultivated] Chile, Biobío, Concepción, University of Concepción, 25 m, $36^{\circ}49'41.0''$ S, $73^{\circ}02'12.2''$ W, 5 Feb 2023, Márquez-Corro & Muñoz-Schüler 87JMC23 (UPOS). Propagules originally provided by the University of Concepción nursery, collected from Chile, Biobío, Concepción, $36^{\circ}50'24''$ S, $73^{\circ}01'29''$ W.

This is the first estimation for the monotypic family Aextoxicaceae. Its chromosome number was reported to be $2n = 32$ (Goldblatt, 1976). The only other family in the order Berberidopsidales, the also species-poor Berberidopsidaceae (2 genera, 3 species) has been reported to have $2n = 42$ chromosomes and $2C = 0.52$ pg for *Berberidopsis corallina* Hook.f. (Hanson & al., 2001), estimating a 6x ploidy. Comparing our results, it seems that *Aextoxicon* Ruiz & Pav. could have undergone several anagenetic polyploidization events with later diploidization, maybe combined with a strong accumulation of repetitive elements. Nevertheless, more karyological studies are required in these families to properly assess ploidy levels.

BLECHNACEAE

***Austroblechnum lechleri* (T.Moore) Gasper & V.A.O.

Dittrich

$2C = 23.65 \pm 0.121$ pg, $CV = 3.22$ (Ebihara). Chile, Biobío, Polcura, Polcura mountain range, path to Frutillar, 943 m, $37^{\circ}15'53.1''$ S $71^{\circ}44'03.9''$ W, 20 Jan 2023, Muñoz-Schüler & al. 56.PMS. ENE (CONC, MACB).

First genome size estimation for this Chilean subendemic genus. The $2C$ values obtained here are similar to the average of the family reported so far (Pellicer & Leitch, 2020).

**Blechnum* sp.

$2C = 17.75 \pm 0.069$ pg, $CV = 4.03$ (Ebihara). Chile, Araucanía, Malleco, Nahuelbuta National Park, “Estero de los Gringos” trail, 1258 m, $37^{\circ}48'45.2''$ S, $73^{\circ}00'45.8''$ W, 22 Jan 2023, Martín-Bravo & al. 46bisSMB23 (CONC, MACB).

This is the first genome size reported for a South American *Blechnum* L., and also similar to the average estimation of the genus (Pellicer & Leitch, 2020).

***Parablechnum chilense* (Kaulf.) Gasper & Salino

2C = 27.03 ± 0.188 pg, CV = 4.48 (Ebihara). Chile, Ñuble, Chillán, Termas de Chillán, Aguas Calientes valley, 2081 m, 36°54'23.4"S, 71°22'27.9"W, 18 Jan 2023, *Martín-Bravo & al. 15SMB23* (CONC, MACB).

2C = 26.64 ± 0.084 pg, CV = 4.03 (Ebihara). Chile, Los Lagos, Llanquihue, camino a la laguna Sofía, 85 m, 41°35'34.3"S, 72°41'18.3"W, 27 Jan 2023, *Jiménez-Mejías & al. 31PJM-CL23* (CONC, MACB).

These two estimations are the first for *Parablechnum* C.Presl. Although the genus has been reported to have a labile karyotype (Gasper & al., 2016), this species has been reported to have 2n = 66 chromosomes (Jara-Seguel & al., 2006).

BROMELIACEAE

**Puya alpestris* (Poepp.) Gay

2C = 1.00 ± 0.001 pg, CV = 3.99 (GPB). [Cultivated] Chile, Biobío, Concepción, University of Concepción, 18 m, 36°49'39.8" S, 73°02'15.8"W, 5 Feb 2023, *Márquez-Corro & Muñoz-Schüler 82JMC23* (UPOS). Specimen originally transplanted from the wild in the 1940s, collected from Chile, Coquimbo, Limarí, 30°40'15"S, 71°38'34"W.

This is the first genome size estimation for the species. It displays similar values as the four previous reports for the genus (Pellicer & Leitch, 2020).

CELASTRACEAE

***Maytenus boaria* Molina

2C = 2.84 ± 0.008 pg, CV = 3.22 (GPB). Chile, Biobío, Concepción, University of Concepción, 44 m, 36°49'44.4"S, 73°02'07.6"W, 05 Feb 2023, *Márquez-Corro & Muñoz-Schüler 88JMC23* (UPOS).

This is the first genome size estimation for the genus, and the first to a South American Celastraceae lineage. Although the value is somewhat similar to the family average, this family has been reported (Pellicer & Leitch, 2020) to vary from 2C = 0.37 to 8.80 pg, showing remarkable changes along the lineages that may be indicative of high ploidy level variation.

CUNONIACEAE

****Weinmannia trichosperma* Cav.

2C = 0.98 ± 0.031 pg, CV = 7.75 (Galbraith). [Cultivated] Chile, Biobío, Concepción, University of Concepción, 26 m, 36°49'41.0"S, 73°02'13.3"W, 5 Feb 2023, *Márquez-Corro & Muñoz-Schüler 93JMC23* (UPOS). Propagules originally provided by the University of Concepción nursery, collected from Chile, Biobío, Concepción, 36°50'24"S, 73°01'29"W. [Fig. 10A]

This is the first genome size estimation for the family Cunoniaceae. Although the coefficient of variation (CV) is quite high, similar values have been obtained in an unpublished work (J. Pellicer, personal observation). This value is close to the single known report for the close family Elaeocarpaceae, in which *Crinodendron patagua* Molina was reported to have 2n = 16 and 2C = 0.60 pg (Hanson & al., 2005).

CUPRESSACEAE

Fitzroya cupressoides (Molina) I.M.Johnst.

2C = 35.28 ± 0.141 pg, CV = 4.11 (GPB). [Cultivated] Chile, Biobío, Concepción, University of Concepción, 18 m, 36°49'40.5" S, 73°02'15.5"W, 5 Feb 2023, *Márquez-Corro & Muñoz-Schüler*

83JMC23 (UPOS). Specimen from vegetative cutting originally provided by the Austral University of Chile nursery, collected from Chile, Los Ríos, Ranco, 40°11'41"S, 73°26'07"W.

Second genome size estimation for the Patagonian cypress, the largest tree in South America. It is an endangered (EN; Hechenleitner & al., 2005), tetraploid (2n = 44; Zonneveld, 2012) species with a highly restricted distribution in Chile and Argentina. The first estimation was reported by Zonneveld (2012), indicating a similar average value of 2C = 35 pg.

DIOSCOREACEAE

**Dioscorea brachybotrya* Poepp.

2C = 1.89 ± 0.009 pg, CV = 3.77 (LB01). Chile, Biobío, Polcura, Polcura mountain range, path to Frutillar, 943 m, 37°15'53.1" S, 71°44'03.9"W, 20 Jan 2023, *Muñoz-Schüler & al. 54.PMS.ENE* (CONC, UPOS). [Fig. 10B]

This is the first *Dioscorea* L. from South America ever estimated. Our report indicates *D. brachybotrya* as a polyploid species based on similar estimates in a recent study of the genus (Viruel & al., 2019). However, more karyological studies should be carried out to elucidate the complex ploidy system in this lineage of yams.

EUPHORBIACEAE

***Avellanita bustillosii* Phil.

2C = 0.52 ± 0.005 pg, CV = 4.21 (GPB). [Cultivated] Chile, Los Ríos, Lago Ranco, Pitruco, Diego N. Penneckamp's private botanical garden, 192 m, 25 Jan 2023, *Sanz-Arnal & al. 27MSA-CL23* (CONC, MA). Seeds originally provided by the Jardín Botánico Nacional (JBN), collected from Chile, Metropolitana, Paine, proximities of Laguna de Aculeo, 33°50'S, 70°56'W. [Fig. 10C]

This estimation is the first for this monotypic genus endemic to Chile. This critically endangered species (Hechenleitner & al., 2005) also has the lowest genome size registered for the family so far (Pellicer & Leitch, 2020). This sample was analyzed using tomato and rice as standards. Here, only the one using rice is indicated since it displayed better results, but the results using tomato were similar: 2C = 0.52 ± 0.005 pg, CV = 4.31.

FABACEAE

Astragalus cruckshanksii (Hook. & Arn.) Griseb.

2C = 2.26 ± 0.019 pg, CV = 2.67 (GPB). Chile, Coquimbo, Cordillera Doña Ana, Minera El Indio, 3350 m, 29°48'54.8"S, 70°01'19.6"W, 13 Jan 2023, *Muñoz-Schüler & al. 10.PMS.ENE* (CONC).

There is a previous report on the genome size of *Astragalus cruckshanksii* from Neuquén (Argentina) by Dopchiz & al. (1995). In their study, they found 2n = 28 and 2C = 2.88 pg, although they measured significantly fewer nuclei (3 replicates of 60 nuclei). These results may indicate a latitudinal difference in the species that needs further investigation.

Sophora cassioides (Phil.) Sparre

2C = 1.80 ± 0.038 pg, CV = 3.83 (GPB). [Cultivated] Chile, Biobío, Concepción, University of Concepción, 18 m, 36°49'39.2" S, 73°02'14.2"W, 5 Feb 2023, *Márquez-Corro & Muñoz-Schüler 86JMC23* (UPOS). Propagules originally collected from Chile, Biobío, Concepción, 36°49'40"S, 73°02'09"W.

The genome size of this diploid species has been previously estimated to be 2C = 1.61 pg (Espejo & al., 2016). Our results are similar to those reported.

GOMORTEGACEAE

****Gomortega keule* (Molina) Baill.

2C = 2.93 ± 0.009 pg, CV = 3.16 (GPB). Chile, Biobío, Concepción, patches of native forest close to the petrol station on the Itata highway, before Juan Chico, 323 m, 36°44'51.0"S, 72°54'40.1"W, 3 Feb 2023, *Márquez-Corro & al. 79bisJMC23* (UPOS).

This species has only been studied karyologically ($2n = 42$; Baeza & al., 2001; Oginuma & Tobe, 2006), and this is the first genome size estimation for the species, which is the only representative of the family. The queule is a tree species endemic to a highly restricted area in the coastal range around Concepción in regions Maule, Ñuble and Biobío in central southern Chile. It is considered a living fossil with great evolutionary distinctiveness, as the lineage is included within the early divergent Laurales and has been dated to the Cretaceous (Renner, 2005). However, this palaeoendemic is endangered (EN; Echeverría & Campos, 2019) and threatened by habitat destruction due to extensive reforestation with exotic tree species. Recent massive wildfires that affected Central Chile during the summer of 2023 destroyed several wild queule individuals, so its conservation status is likely to have significantly deteriorated (only around 1000 mature individuals were known; Echeverría & Campos, 2019).

JUNCACEAE

**Juncus microcephalus* Kunth

2C = 1.09 ± 0.003 pg, CV = 3.12 (LB01). Chile, Coquimbo, Talahuén, Río Grande valley, beyond Cuesta del Toro, 1623 m, 30°57'37.6"S, 70°31'20.7"W, 15 Jan 2023, *Muñoz-Schüler & al. 35.PMS.ENE* (CONC, UPOS).

This report falls within the average value of the genus. It is the first genome size estimation for the species and, together with the estimation of *J. stipulatus* below, it constitutes the first for *Juncus* L. in South America.

**Juncus stipulatus* Nees & Meyen

2C = 0.93 ± 0.015 pg, CV = 4.22 (GPB). Chile, Ñuble, Chillán, Termas de Chillán, Aguas Calientes valley, 2151 m, 36°54'13.2"S, 71°22'36.6"W, 18 Jan 2023, *Martín-Bravo & al. 09SMB23* (CONC, UPOS).

This estimation is the first for the species, displaying values similar to the genus average.

***Patosia clandestina* (Phil.) Buchenau

2C = 1.37 ± 0.005 pg, CV = 2.60 (LB01). Chile, Coquimbo, Doña Ana mountain range, Mine "El Indio", 3350 m, 29°48'54.8"S, 70°01'19.6"W, 13 Jan 2023, *Muñoz-Schüler & al. 22.PMS.ENE* (CONC, UPOS).

First record for this Andean endemic, monotypic genus. The estimation is slightly lower than the family average (Pellicer & Leitch, 2020). The relationships within the family have not yet been clarified (Drábková & Čestmír, 2007), and further molecular phylogenetic and genomic studies are needed to understand the evolution of this genus, which is a key component of high Andean wetland vegetation, in which it forms very distinctive cushions.

LAURACEAE

***Cryptocarya alba* (Molina) Looser

2C = 2.34 ± 0.021 pg, CV = 3.52 (GPB). Chile, Biobío, Concepción, University of Concepción, 18 m, 36°49'39.3"S, 73°02'13.8"W, 5 Feb 2023, *Márquez-Corro & Muñoz-Schüler 84JMC23* (UPOS). Specimen of natural origin that already existed when the Ottmar Wilhelm Building was built in the 1930s.

This is the first genome size estimation for this genus, and for all the early diverging lineages of Lauraceae (Cryptocaryae). This family has been largely studied karyologically but there is a lack of information on the Cryptocaryae, where different ploidies were reported (e.g., Oginuma & Tobe, 2006).

MONIMIACEAE

***Peumus boldus* Molina

2C = 5.18 ± 0.079 pg, CV = 2.87 (GPB). Chile, Biobío, Concepción, University of Concepción, 42 m, 36°49'46.3"S, 73°02'04.7"W, 5 Feb 2023, *Márquez-Corro & Muñoz-Schüler 89JMC23* (UPOS). [Fig. 10D]

First estimation for the species and Chilean subendemic genus. Within Monimiaceae, it is more than twice the size of the genus *Mollinedia* Ruiz & Pav. (Pellicer & Leitch, 2020). This result points to polyploidization in *Peumus* Molina, as its known chromosome number is $2n = 78$, whereas *Mollinedia* has been reported to have different ploidies $2n = 36, 38, 180$ (Oginuma & Tobe, 2006). Therefore, one could assume that the already estimated genome sizes in *Mollinedia* belong to the lowest registered chromosome numbers, around $2n = 38$, which must be confirmed.

MYRTACEAE

***Luma apiculata* (DC.) Burret

2C = 1.02 ± 0.017 pg, CV = 4.27 (GPB). Chile, Biobío, Concepción, University of Concepción, 45 m, 36°49'46.2"S, 73°02'04.1"W, 5 Feb 2023, *Márquez-Corro & Muñoz-Schüler 90JMC23* (UPOS). [Fig. 10E]

First estimation for this species and Chilean subendemic genus. The 2C values agree with the mean reported for the family (Pellicer & Leitch, 2020). The values reported in the family vary in what looks like different ploidies, even within the genus (e.g., *Psidium* L.). This lineage requires further phylogenetic and genomic studies, as the family still needs nomenclatural rearrangements (Vasconcelos & al., 2017).

NOTHOFAGACEAE

****Nothofagus obliqua* (Mirb.) Oerst.

2C = 1.19 ± 0.001 pg, CV = 3.52 (OXPRO). Chile, Biobío, Concepción, University of Concepción, 45 m, 36°49'46.2"S, 73°02'04.1"W, 5 Feb 2023, *Márquez-Corro & Muñoz-Schüler 91JMC23* (UPOS).

First estimation for this family. *Nothofagus* Blume chromosome number has been reported to be very stable, with this species showing the genus' most frequent number of $2n = 26$ (Jara-Seguel & al., 2014). Values of 2C including or close to the one reported here have been testified for the close families of Fagaceae, Juglandaceae or Betulaceae (Pellicer & Leitch, 2020).

PODOCARPACEAE

**Podocarpus salignus* D. Don

2C = 17.78 ± 0.332 pg, CV = 4.73 (OXPRO). Chile, Biobío, Concepción, University of Concepción, 56 m, 36°49'46.7"S, 73°02'03.8"W, 5 Feb 2023, *Márquez-Corro & Muñoz-Schüler 92JMC23* (UPOS).

Similar 2C values have been reported for the genus, although they tend to be slightly higher (Pellicer & Leitch, 2020). This is the first estimation of this vulnerable species (Hechenleitner & al., 2005) endemic to Chile, and for South American *Podocarpus* L'Hér. ex Pers.

RESTIONACEAE

***Apodasmia chilensis* (Gay) B.G.Briggs & L.A.S.Johnson

2C = 2.09 ± 0.014 pg, CV = 4.20 (LB01). Chile, Los Lagos, Llanquihue, cove north of Punta Metri, 7 m, 41°35'19.6"S, 72°42'05.0"W, 27 Jan 2023, *Jiménez-Mejías & al.* 32PJM-CL23 (CONC, UPOS).

First record for this Chilean endemic species, and for the South American representatives of the family (Pellicer & Leitch, 2020). *Gaimardia australis* Gaudich. and *Apodasmia chilensis* are the only two South American native and endemic restiads (POWO, 2023). Therefore, this data is important to understand in future studies whether different ploidies may be associated with an extension of the genus' natural range.

RUTACEAE

***Pitavia punctata* (Ruiz & Pav.) Molina

2C = 1.07 ± 0.006 pg, CV = 3.92 (GPB). [Cultivated] Chile, Biobío, Concepción, University of Concepción, 18 m, 36°49'40.5" S, 73°02'12.8"W, 5 Feb 2023, *Márquez-Corro & Muñoz-Schüler* 85JMC23 (UPOS). Seeds originally provided by Arauco S.A. Forestry Company nursery, collected from Chile, Biobío, Concepción, 37°06'48"S, 73°09'01"W.

First estimation for this Critically Endangered (Rivera Caniulao, 2021), Chilean endemic, monotypic genus. This species has been reported to have 2n = 36 chromosomes (Stace & al., 1993).

WINTERACEAE

***Drimys winteri* J.R.Forst. & G.Forst.

2C = 3.90 ± 0.011 pg, CV = 3.04 (GPB). [Cultivated] Chile, Biobío, Concepción, University of Concepción, 18 m, 36°49'38.1" S, 73°02'13.1"W, 5 Feb 2023, *Márquez-Corro & Muñoz-Schüler* 94JMC23 (UPOS). Propagules originally provided by the University of Concepción nursery, collected from Chile, Biobío, Concepción, 36°50'24"S, 73°01'29"W. [Fig. 10F]

This is the first estimation for the species, and the second for the genus. *Drimys winteri* presents an almost twice as large genome as *D. vickeriana* A.C.Sm. (Pellicer & Leitch, 2020). This is probably due to the different ploidies present in the genus, as *D. winteri* has been reported to have 2n = 86, but also 2n = 26 chromosomes have been counted in *Drimys* J.R.Forst. & G.Forst. (Ehrendorfer & al., 1968).

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- Methods for chromosome analysis according to Cordeiro & al. (2020).
- * First chromosome count for the species.
** First chromosome count for the genus.
- ANACARDIACEAE**
Anacardium occidentale L.
2n = 40, CHN. Brazil, Pernambuco, Taquaritinga do Norte, 07°54'11"S, 36°02'39"W, 28 Jan 2018, *L.P. Felix 17303* (EAN) [Fig. 11A].
**Astronium fraxinifolium* Schott
2n = 30, CHN. Brazil, Paraíba, Maturéia, 07°15'54"S, 37°22'33"W, 2 Dec 2017, *L.P. Felix 17114* (EAN) [Figs. 11B, 13A].
Mangifera indica L.
2n = 40, CHN. Brazil, Paraíba, Sertãozinho, 06°44'06"S, 35°27'30"W, 3 Jun 2018, *J.M.P. Cordeiro 1337* (EAN) [Fig. 11C].
Myracrodruon urundeuva Allemão
2n = 30, CHN. Brazil, Pernambuco, Taquaritinga do Norte, 07°54'11"S, 36°02'39"W, 28 Jan 2018, *L.P. Felix 17308* (EAN) [Fig. 11D].
**Schinopsis brasiliensis* Engl.
2n = 28, CHN. Brazil, Paraíba, São José dos Cordeiros, 07°28'08"S, 36°53'47"W, 30 Nov 2017, *L.P. Felix 17100* (EAN) [Figs. 11E, 13B].
Schinus terebinthifolia Raddi
2n = 28, CHN. Brazil, Paraíba, João Pessoa, 07°09'13"S, 34°52'58"W, 28 Jun 2018, *L.P. Felix 17496* (EAN) [Fig. 11F].
- BURSERACEAE**
**Commiphora leptophloeos* (Mart.) J.B.Gillett
2n = 26, CHN. Brazil, Paraíba, Areia, 06°58'03"S, 35°42'58"W, 18 Jul 2017, *L.P. Felix 16687* (EAN) [Figs. 11G, 13C].
- CANNABACEAE**
Celtis iguanaea (Jacq.) Sarg.
2n = 20, CHN. Brazil, Paraíba, Areia, 06°57'49"S, 35°44'34"W, 9 Jun 2017, *P.C. Gadelha Neto 4160* (EAN) [Fig. 11H].
- LENTIBULARIACEAE**
**Utricularia quelchii* N.E.Br.
2n = 18, CHN. Brazil, Roraima, Monte Roraima, 05°13'51"N, 60°43'46"W, 21 Feb 2017, *L.P. Felix 16222* (EAN) [Figs. 11I, 13D].
- MALPIGHIACEAE**
***Amorimia septentrionalis* W.R.Anderson,
2n = 20, CHN. Brazil, Paraíba, Sertãozinho, 06°44'06"S, 35°27'30"W, 16 Jun 2018, *J.M.P. Cordeiro 1339* (EAN) [Figs. 11J, 13E].
- MELIACEAE**
Azadirachta indica A.Juss.
2n = 28, CHN. Brazil, Paraíba, Serra Branca, 07°29'00"S, 36°29'54"W, 30 Jun 2018, *J.M.P. Cordeiro 1342* (EAN) [Fig. 11K].

IAPT chromosome data 40/8

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