

Comparative karyotypic analysis and cytotaxonomy in the *Alstroemeria ligtu* L. (Alstroemeriaceae) complex of Chile

Por: Baeza, C (Baeza, Carlos)^[1]; Finot, V (Finot, Victor)^[2]; Ruiz, E (Ruiz, Eduardo)^[1]; Carrasco, P (Carrasco, Pedro)^[1]; Novoa, P (Novoa, Patricio)^[3]; Stuessy, T (Stuessy, Tod)^[4]; Gonzalez, A (Gonzalez, Alejandra)^[5]

BRAZILIAN JOURNAL OF BOTANY

Volumen: 39

Número: 1

Páginas: 305-313

DOI: 10.1007/s40415-015-0220-4

Fecha de publicación: MAR 2016

[Ver información de revista](#)

Resumen

Due to the variability in morphology and color of the flowers as well as the excellent post-harvest durability of *Alstroemeria*, many species are cultivated as ornamental and cut flowers. *Alstroemeria ligtu* L., endemic to Chile, has also been a source of artificial hybridizations for development of new cultivars. Cytogenetic studies provide clues for possible breeding programs and taxonomically useful data to clear up infraspecific relationships of Chilean native populations. Three subspecies are recognized within *A. ligtu*: subsp. *ligtu*, subsp. *splendens* Munoz-Schick, and subsp. *simsii* (Sprengel) Bayer. The objective of this paper is to characterize karyotypically these subspecies and to clarify their taxonomic status. Fourteen populations were collected throughout its distributional range. Chromosome number, karyotypic formulae, karyotypes, ideograms, intrachromosomal asymmetry index M-CA, and interchromosomal asymmetry index CVCL were calculated. All studied populations showed $2n = 2x = 16$ chromosomes. Subspecies *ligtu* and *simsii* are clearly differentiated from each other in M-CA and together from subsp. *splendens* with CVCL. Intrachromosomal asymmetry index revealed two populational groups within subsp. *splendens*. These populations also differ in karyotypes formulae, habitat, soil type, and distribution. We concluded that a fourth subspecies should be described from populations located in the lower part of the cordillera de los Andes in the Region of Maule. Populations of higher elevations correspond to those already described as subsp. *splendens*.

Palabras clave

Palabras clave de autor: *Alstroemeria* complex; Chile; Cytotaxonomy; Karyotype

KeyWords Plus: A-LIGTU; POPULATIONS; HYBRIDS

Información del autor

Dirección para petición de copias: Baeza, C (autor para petición de copias)

+ Univ Concepcion, Dept Bot, Fac Ciencias Nat & Oceanog, Concepcion, Chile.

Direcciones:

- + [1] Univ Concepcion, Dept Bot, Fac Ciencias Nat & Oceanog, Concepcion, Chile
- + [2] Univ Concepcion, Dept Prod Anim, Fac Agron, Concepcion, Chile
- [3] Corp Nacl Forestal, Jardin Bot Vina del Mar, Camino El Olivar 305, Vina Del Mar, Chile
- + [4] Ohio State Univ, Herbarium, Dept Evolut Ecol & Organismal Biol, 1315 Kinnear Rd, Columbus, OH 43212 USA
- + [5] Univ Chile, Fac Ciencias, Dept Ciencias Ecol, Santiago, Chile

Direcciones de correo electrónico: cbaeza@udec.cl

Financiación

| Entidad financiadora | Número de concesión |
|----------------------|---------------------|
| Fondecyt | 1130349 |

[Ver texto de financiación](#)

Editorial

SOC BOTANICA SAO PAULO, CAIXA POSTAL 57088, SAO PAULO, SP 00000, BRAZIL

Categorías / Clasificación

Áreas de investigación: Plant Sciences

Categorías de Web of Science: Plant Sciences

Información del documento

Tipo de documento: Article

Idioma: English

Número de acceso: [WOS:000373897100031](#)

ISSN: 1806-9959

Información de la revista

- **Impact Factor:** [Journal Citation Reports®](#)

Otra información

Número IDS: DJ0MD

Referencias citadas en la Colección principal de Web of Science: 23

Veces citado en la Colección principal de Web of Science: 0