

A NEW VARIETY OF *AZORELLA DIVERSIFOLIA*
(APIACEAE) FROM SOUTHERN CHILE

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ABSTRACT

Azorella diversifolia var. **antillanca** is described as a new variety from Chile. This variety differs from *A. diversifolia* Clos ex Gay var. *diversifolia* by its divided leaves and a distribution primarily within the eastern portion of Region XI (Los Lagos).

RESUMEN

Se describe una nueva variedad, *Azorella diversifolia* var. *antillanca*, del Parque Nacional Puyehue, Chile. Esta variedad es diferente de *A. diversifolia* Clos ex Gay var. *diversifolia* en la división de sus hojas y una distribución en el este de Region XI (Los Lagos).

As part of her treatment of *Azorella* Lam. within Argentina, Martínez (1989) combined *Azorella incisa* (Griseb.) Wedd. with *Azorella diversifolia* Clos ex Gay. Originally these two species were distinguished by their degree of blade division and leaf-lobe composition (Clos 1847; Weddell 1857). Martínez (1989) found these characters to be too variable for the recognition of separate species. During a revision of *Mulinum* Pers. (Zech 1992), *A. diversifolia* has been further studied based upon field and herbarium collections. This additional examination showed consistent infraspecific variation supported by distribution and leaf morphology. Following Martínez (1989), and Stuessy's (1990) criteria for distinguishing infraspecific taxa, I therefore further refine the species and describe the following variety of *A. diversifolia*.

***Azorella diversifolia* var. *antillanca* Zech, var. nov.**—TYPE: CHILE, Región De Los Lagos, Prov. Osorno, Parque Nacional Puyehue, Antillanca Ski Resort on Volcán Blanca, at the curve in the road below the ski lift, 1990 m, 19 January 1990, *J. Zech et al.* 48 (holotype, OS: isotypes, CONC, GH, LB, UC).

Azorella diversifolia var. *antillanca* foliis incisis, plus trilobis sinubus 4.0–11.0 (6.1) mm; margine basi contiguo vel imbricato valde angusto vel clauso, foliis interdum variegatis.

Plants caespitose, 4–10 cm in diameter, herbaceous perennial. Rhizomes stout, 2–5 mm in diameter, branched, woody, distal portion with persistent leaf sheaths. Leaves basal, whorled, 3–6 cm long; blade rhomboidal to ovate, 10–24 mm long, 7–20 mm wide,

glabrous, variegated, bright yellow and green, or blade green, 3–5-lobed, sinuses 4.0–11.0 (6.1) mm deep, sinuses narrow with sides overlapping, lobes dentate; venation palmate; petiole 1.5–5.5 cm long, 1–3 mm wide at middle, leaf base clasping, margin pubescent. Umbels 2–6, 10–30 flowers per umbel; peduncle 0.5–4.5 cm long; involucre bracts 10–15, lanceolate, 6–8 mm long, glabrous or with marginal hairs. Flowers 5-merous, 2 mm in diameter, actinomorphic; calyx tubular with 5 distal lobes, green; corolla free, petals yellow, oblong, 1–2 mm long; stamens exserted, anthers red; pedicels 1–5 mm long. Fruit ovate to oblong, compressed dorsally, green, 2–4 mm long, 2 mm wide.

Azorella diversifolia var. *antillanca* differs from *A. diversifolia* var. *diversifolia* based upon characters of the leaves and distribution. Variety *antillanca*'s leaves are deeply lobed, the sinuses 4.0–11.0 mm deep with a mean of 6.1 mm, and may or may not be variegated, while var. *diversifolia*'s leaves lack variegation and the lobes may be shallow, the sinuses 1.75–3.5 mm deep with a mean of 2.7 mm, or absent. While some leaves of individual plants do display a mixture of blade morphology, the majority of leaves within a single plant are clearly of one or the other blade type described above. Leaf variegation was found within a single population of var. *antillanca* (J. Zech *et al.* 48; OS, CONC, GH, LP, UC) and may represent a further form of this variety.

Although *A. diversifolia* occurs within both Chile and Argentina, its primary distribution lies within Chile. Martínez (1989) reported only two collections for Argentina, within Provincias Santa Cruz (C. Hicken *s.n.*; SI) and Neuquén (P. Moreau *s.n.*; BA, UC!). The Neuquén material is var. *diversifolia* while the Santa Cruz material was not available for study. Within Chile, *A. diversifolia* occurs within Regions X and XI, in La Araucanía and Los Lagos, respectively. Variety *diversifolia* is found primarily in the north-west within Provincia Malleco with a concentration in and around Parque Nacional de Nahuelbuta (Fig. 1). Variety *antillanca* occurs primarily in the east within Provincias Osorno and Llanquihue (Fig. 1). Variety *antillanca* is found on and around Volcáns Osorno and Casa Blanca. While distinct distributions are present for both varieties, some overlap does exist (Fig. 1). The lack of mutual exclusivity may indicate that the species is undergoing initial divergence. Variety *antillanca* was named after the Refugio Antillanca above which the type specimen was collected.

The character of red anthers was not included in the original descriptions of Clos (1847) or Weddell (1857) or more recently by either Muñoz (1980) or Martínez (1989). Examination of further material has shown this character to be common to *A. diversifolia*

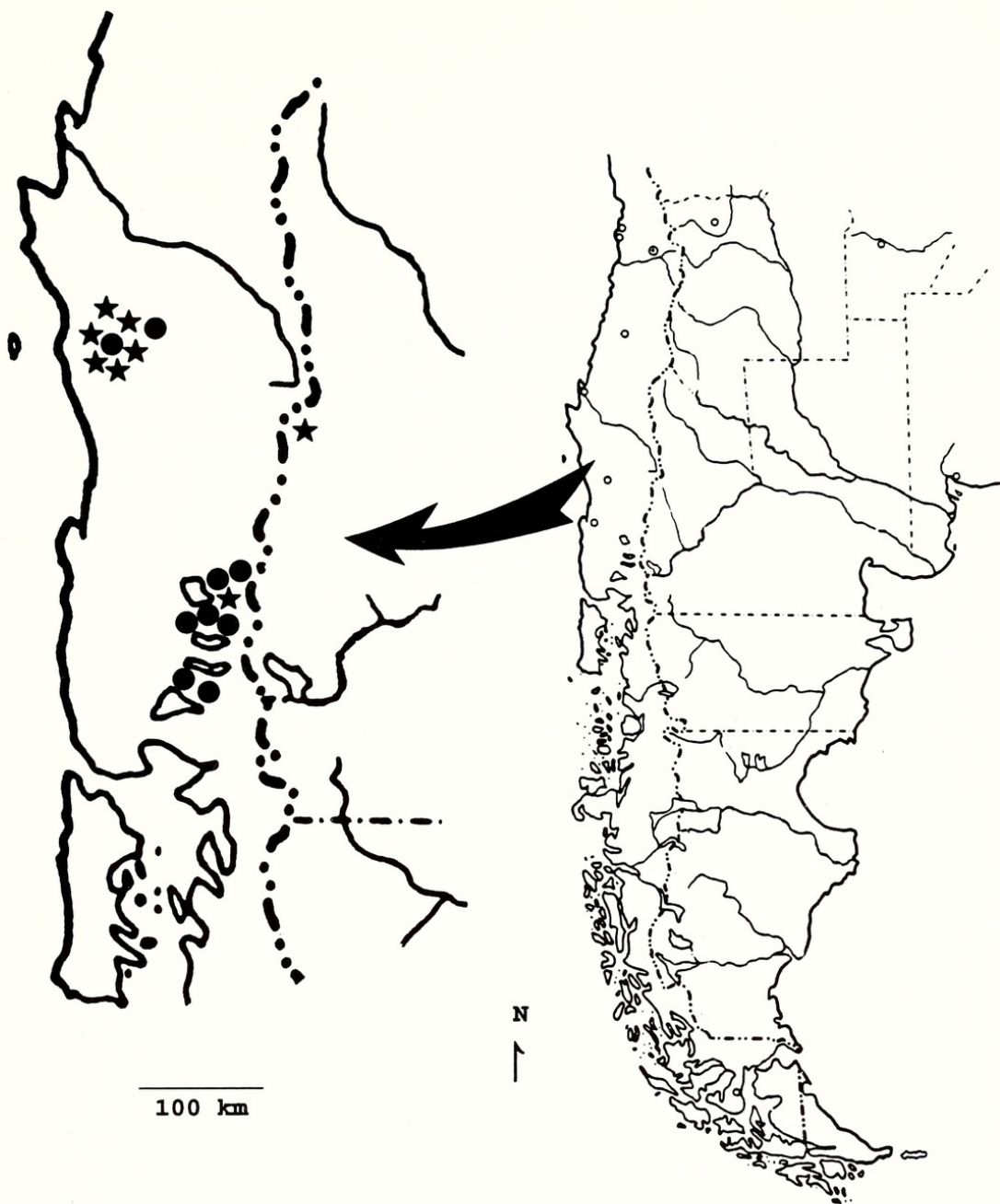


FIG. 1. Distribution of *Azorella diversifolia* var. *antillanca* and var. *diversifolia* within Chile and Argentina. Variety *antillanca* is indicated by solid circles and variety *diversifolia* by stars.

and a distinguishing feature in comparison to other species of *Azorella*.

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LITERATURE CITED

- CLOS, D. 1847. Umbelíferas. *In* Historia física y política de Chile, Botánica: Flora chilena, ed. C. Gay, 3:61–145. Paris: Fain Y Thunot.
- MARTÍNEZ, S. 1989. El género *Azorella* (Apiaceae-Hydrocotyloideae) en La Argentina. *Darwiniana*, 29(1–4):139–178.
- MUÑOZ S., M. 1980. Flora del Parque Nacional Puyehue. 1–557. Santiago: Editorial Universitaria.
- STUESSY, T. F. 1990. Plant Taxonomy: The systematic evaluation of comparative data. i–514. New York: Columbia University Press.
- WEDDELL, H. A. 1857. Umbelliferae. *Chloris andina*, 2:186–206. Paris: P. Bertand.
- ZECH, J. C. 1992. Systematics of the genus *Mulinum* Pers. (Apiaceae, Hydrocotyloideae, Mulineae). i–223. Columbus: The Ohio State University.



Zech, James C. 1997. "A NEW VARIETY OF AZORELLA DIVERSIFOLIA (APIACEAE) FROM SOUTHERN CHILE." *Madroño; a West American journal of botany* 44, 193–196.

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