



## The genus *Dennstaedtia* Bernh. (Dennstaedtiaceae) in Argentina

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### Abstract

A morphological analysis of the genus *Dennstaedtia* (Dennstaedtiaceae) from Argentina is carried out and distributional data updated. The studied species are: *Dennstaedtia cicutaria*, *D. dissecta*, *D. glauca* and *D. globulifera*. Until now, the information concerning the genus in Argentina was fragmented and incomplete. A comprehensive key to the species and detailed descriptions, distribution maps, habitat considerations, relevant notes, as well as photographs of diagnostic characters are provided for each taxon.

**Key words:** Argentina, Dennstaedtiaceae, distribution, flora, morphology

### Resumen

Se realiza un análisis morfológico del género *Dennstaedtia* (Dennstaedtiaceae) en la Argentina, y se actualizan los datos de su distribución. Las especies estudiadas son: *Dennstaedtia cicutaria*, *D. dissecta*, *D. glauca* y *D. globulifera*. Hasta el momento, la información sobre el género en este país resultaba fragmentaria e incompleta. Se provee una clave de las especies y descripciones detalladas, mapas de distribución, consideraciones sobre el hábitat, notas relevantes, y fotografías de los caracteres diagnósticos para cada uno de los taxones.

**Palabras clave:** Argentina, Dennstaedtiaceae, distribución, flora, morfología

### Introduction

The genus *Dennstaedtia* Bernh. (1800: 124) consists of about 45 species usually found from tropical to warm temperate regions worldwide (Kramer & Green 1990). In the review of the genus in America, Tryon (1960) recognized 11 species. However recent studies showed that at least 20–22 taxa are present in the continent (Navarrete & Øllgaard 2000, Rojas-Alvarado & Tejero-Díez 2002, Mickel & Smith 2004). Most of the American species have a primarily Andean distribution range, extending from southern United States and Mexico to southern Brazil and Argentina (Tryon & Tryon 1982) growing in humid mountain forests, forest clearings, river banks and secondary vegetation areas.

*Dennstaedtia* species are characterized by long-creeping, solenostelic rhizomes, glabrous or hairy, with brownish uni-multicellular hairs. Due to the length and branching degree of the rhizome, the individuals can reach great dimensions and cover extensive areas. The fronds have 1–4 pinnate-pinnatifid blades, up to 7 m long and 1.5 m wide, glabrous to pubescent, free veins and submarginal slender to clavate apex. Many times, fronds are supported on surrounding vegetation because they reach a large size (Tryon 1964). The sori are marginal and have a double cylindrical or globular cup- or purse-shaped indusia, consisting of an inner part, which is the true indusium, and another external one formed by the reflexed leaf margin. The spores are trilete, with a verrucate, tuberculate, and reticulate ornamentation.

The taxonomic limits of the taxa are generally complicated due to the fact that, in most cases, the specimens are incomplete and the lack of diagnostic characters makes the identification of the species quite difficult (Navarrete & Øllgaard 2000). Additionally, in some taxa, the morphology of younger specimens may differ from that of the adult ones, which can lead to misunderstandings in the identifications (Tryon 1960).

Maxon 1938: 39. This latter species also presents spores ornamented with broad ridges, fused in reticles. Although these two taxa look very similar, they can be distinguished by three distinctive characters: the texture of the lamina on the abaxial face, which is coriaceous and bright in *D. bipinnata* (vs. herbaceous and opaque in *D. globulifera*); the trichomes on the abaxial surface which are fairly deciduous or sparse (vs. persistent and abundant); and the basal segments of the pinnules of the central pinna which are opposite, not ascending and similar in size (vs. alternate, ascending and varying in size). The distributional range of these two species is similar. However, *D. bipinnata* spreads northwards up to South Florida (United States of America), being in Bolivia its southernmost record. This species has not been reported yet for Argentina.

**Specimens examined**—: ARGENTINA. Chaco: Dpto. San Fernando, Fontana, August 1932, *Meyer 644* (SI). Córdoba: Dpto. Punilla, Huerta Grande, 13 February 1903, *Stuckert 12773* (CORD); Casa Bamba, 14 June 1907, *Kurtz 13097* (CORD). Dpto. Santa María, Alta Gracia, 13 February 1903, *Stuckert 12778* (CORD). Jujuy: Dpto. Ledesma, Parque Nacional Calilegua, 4 July 2010, *Larsen & Arana 124* (RCV, SI). Dpto. Santa Bárbara: Sierra de Santa Bárbara, 1450 m, 15 December 1962, *de la Sota 2965* (SI). Misiones: Dpto. Candelaria, Santa Ana, December 1912, *Rodríguez 664* (BA); Dpto. Eldorado, Ruta Provincial 17, 65 km de Dos Hermanas, camino a Eldorado, 14 October 1996, *Morrone et al. 1318* (MO); Dpto. Guaraní, Ruta Provincial 15, de Ruta Nacional 14 a predio de la UNAM, 17.5 km de Ruta Nacional 14, 25 February 1999, *Zuloaga & Morrone 6897* (SI); Dpto. Iguazú, Parque Nacional Iguazú, Ruta 101, 3 December 1993, *Vanni et al. 3184* (LP); Dpto. Libertador General San Martín, Gruta y Salto 3 de Mayo, Puerto Rico, 12 December 1970, *de la Sota et al. 6086* (LP). Salta: Dpto. Anta: Parque Nacional El Rey, 24 March 1981, *Brown 1343* (MO); Dpto. Capital, Quebrada de San Lorenzo, 23 April 1994, *Martínez 139* (MCNS); 23 June 1985, *Palací 64* (MCNS); Dpto. Orán, Aguas Blancas, 18 July 1986, *Palací 623* (LP). Tucumán: Dpto. Río Chico, entre canal 17 y Arroyo Aradito, 28 March 1942, *Meyer 4378* (SI); Dpto. Tafi del Valle: Potrero de las Tablas, 20 September 1956, *de la Sota 1102* (LIL).

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