

TILLANDSIA MARCONAE TILL & VITEK, A BROMELIAD SPECIES NEW TO CHILE

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RESUMEN

Tillandsia marconae Till & Vitek se indica por primera vez para Chile. La especie habita el desierto costero del sur del Perú y norte de Chile.
Se discute la presencia de *Tillandsia paleacea* Presl en Chile.

Palabras claves: Taxonomía, *Tillandsia marconae*, *T. paleacea*, Bromeliaceae, Chile, Perú.

ABSTRACT

Tillandsia marconae Till & Vitek (Bromeliaceae) is recorded for Chile for the first time. The species occurs in the coastal desert of Southern Perú and Northern Chile. The occurrence of *Tillandsia paleacea* Presl in Chile is discussed.

Key words: Taxonomy, *Tillandsia marconae*, *T. paleacea*, Bromeliaceae, Chile, Perú.

INTRODUCTION

Some years ago a plant was collected in Northern Chile, at Pampa de Chuño, Arica, by Ingrid González and Patricia Muñoz. They were two pupils of an Arica school that had presented a work to the Feria Científica Juvenil in Santiago, with the name "El clavel del aire, un futuro verde para Arica".

The morphology of the specimens was studied and compared with that of the *Tillandsias* present in Chile; however, they didn't correspond to any Chilean species.

The specimens were at first thought to belong in the very variable *Tillandsia paleacea* Presl, but finally it was identified as *Tillandsia marconae* Till & Vitek, a recently described species, until now only recorded from Southern Perú (Dept. Ica, Province Nazca).

TILLANDSIA MARCONAE IN CHILE, DESCRIPTION AND DISTRIBUTION

The morphology of the specimens was studied and compared with that of the type specimens of *Tillandsia marconae* (WU) and *T. paleacea* (PR). Also, almost 50 specimens of *T. paleacea* from CONC, M, P, WU and PR, were studied to get a better impression of the variability of that species.

Luther in Kiff 1991, and Till & Vitek 1985, studied whether *T. marconae* is a mere form of the very variable *T. paleacea* or is of hybridogen origin, with *T. paleacea* being one of the parents; however, they concluded that the vegetative (slender habit, leaf shape) and, more strikingly, the floral characters (size and shape of sepals, petals and pistil) differ from *T. paleacea*.

A description and drawing of *T. marconae* are given in Till & Vitek (1985) and Till (1993), and photographs in Till (1993).

As the two specimens collected by González & Muñoz s/n display (Fig. 2), plants of *T. marconae* can grow taller than observed before, so an amended description of the species is given below.

Tillandsia marconae Till & Vitek, Plant Syst. Evol. 149:143(1945). Type: Perú, Dept. Ica, Prov. Nazca, Lomas de Marcona, vía ad Campamento de Belvedere, 600-800 m, 25.08.1982, Till, W. & Vitek, E. 820825/137 (=Till, W. 234) (WU, holo!) (Fig. 1).

Plant caulescent, ±erect, flowering (10-)12-20(-30) cm high. Leaves many, polystichous, densely lepidote. Leaf-sheaths ovate, 13-25 x 12-16 mm, pale, the basal parts ± glabrous. Leafblades very narrowly triangular, ±flat, 65-140 mm long and 3-4 mm wide at base, subulate, erect or diverging (leaf-tips often broken in herbarium specimens). Scape 25-45 mm long, erect, not exceeding the leaves. Inflorescence 15-30 mm long, simple, narrowly lanceolate, complanate, 3-5 flowered, the flowers distichous. Floral bracts 8-11 x 6-7 mm, erect, ecarinate, greenish to purplish, lepidote, with an inconspicuous mucro about 0,3 mm long. Sepals 9-12 x 3,5-5 mm, ovate, broadly acute, glabrous, the posterior inconspicuously carinate to ecarinate, straw-coloured on herbarium specimens. Petals 8-12 x 3-3,5 mm, the narrow, (pale-) violet plate 3-5 mm, the white claw 5-7 mm long, glabrous. Stamens included, filaments 2 mm, anthers 2-2,5 mm long. Pistil 3,5-4,5 mm long, style stout, 1,5-2 mm long.

As Till (1993:69) deducts from the relative position of anthers and stigmas "...self-pollination is possible and advantageous under desert climate conditions". No fully opened flowers were observed on the two plants from Northern Chile; possibly, the flowers are cleistogamous.

The distribution map (Fig. 3) gives the known collecting localities of *T. marconae*. An additional collection (life-material), made by Prof. Dr. Werner Rauh (Heidelberg) between Arequipa and Camana, Dept. Arequipa, Southern Perú in September 1967, possibly also belongs to that species (no herbarium specimen seems to exist) (Till & Vitek, 1985).

Investigated specimens cited above

González, I. & Muñoz, P. s.n., 24. VI. 1990; Chile, I Región, Arica, 15 km de la costa de Arica, Pampa de Chuño, entre los valles de Azapa y Lluta. Sus raíces las tapa la arena que es transportada por el viento. Abundante, sólo en ese sector (SGO 118188).

TILLANDSIA PALEACEA PRESL IN CHILE

True *Tillandsia paleacea* has not been collected in or recorded from Chile in recent times. The collections stem from the first half of the 19th century, consisting only of the type specimen of *T. paleacea* collected by Thaddäus Haenke (Fig. 4) and of a collection by Claude Gay (type specimen of *T. chilensis* Baker,

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Fig. 1. Holotype of *T. marconae* (Till & Vitek 820825/137, WU).



Fig. 2. *Tillandsia marconae* Till & Vitek from Pampa de Chuño, I Región, Chile (González & Muñoz, s.n. SGO).

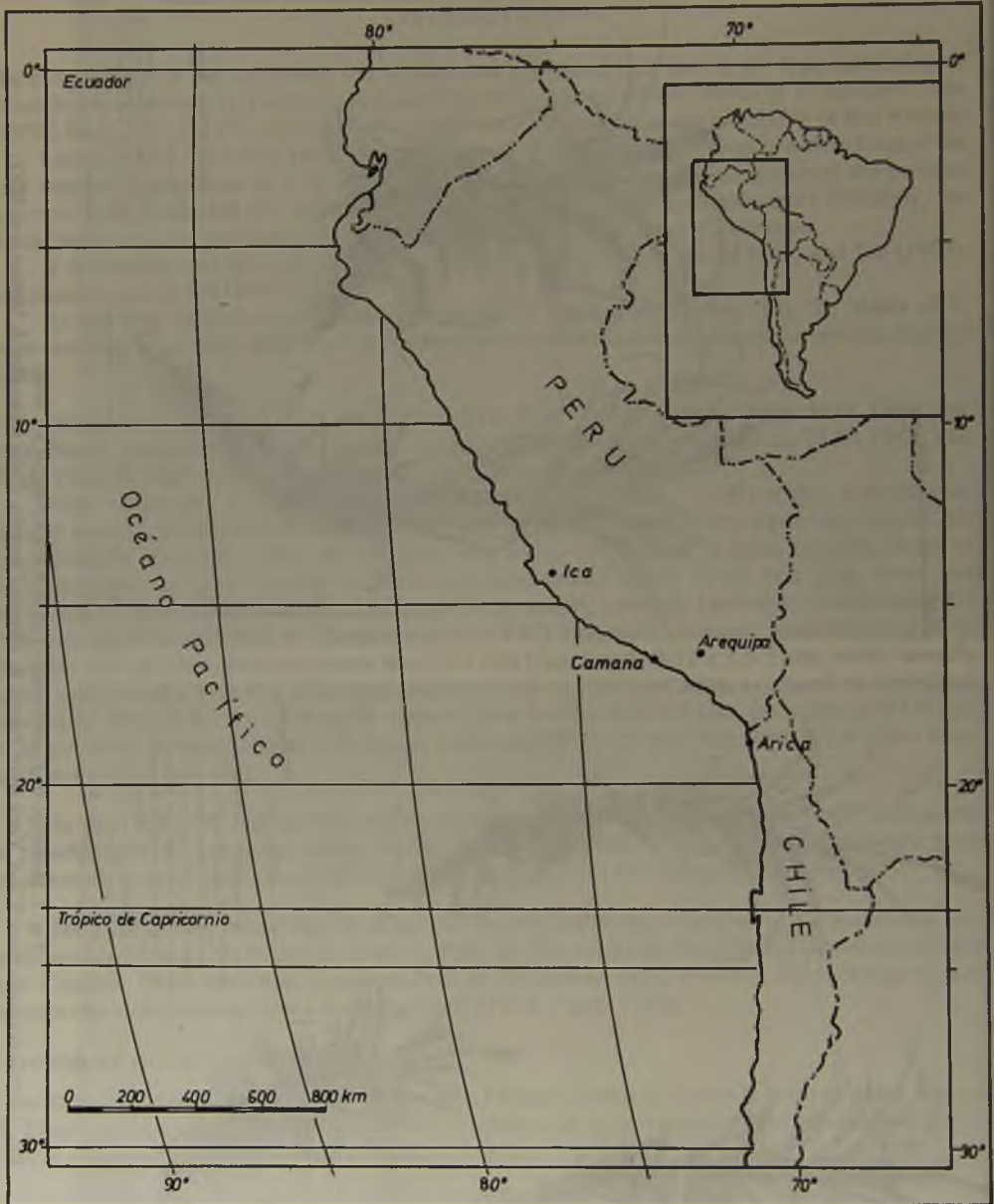


Fig. 3. Distribution of *Tillandsia marconae* Till & Vitek in Southern Perú and Northern Chile.

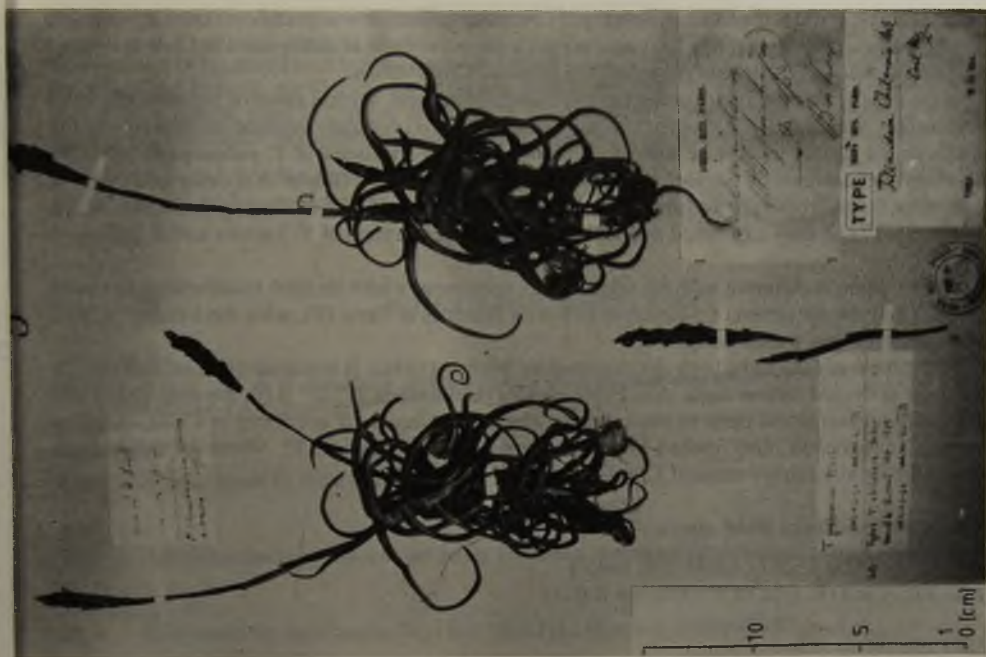


Fig. 4. Holotype of *Tillandsia paleacea* Presl, collected by Thaddäus Haenke, labelled probably erroneously "Chile" (PR).
Fig. 5. Specimen of *Tillandsia paleacea* Presl, collected by Claude Gay, labelled possibly erroneously "Chile" (P).

regarded as conspecific with *T. paleacea* (Fig. 5). No other collection was traced or is cited in literature. As already assumed by Dr. Walter Till (pers. comm.), the occurrence of this species in Chile is open to doubt. Both mentioned collections have only the locality "Chile" given.

In the case of the specimens collected by Thaddäus Haenke, several cases of mislabelling have been recorded. Stearn (1973:4) states "...some of these (labels) certainly became misplaced and the localities stated cannot always be trusted...". That Haenke's specimen of *T. paleacea* is probably mislabelled is underlined by the fact, that another *Tillandsia* labelled "Chile" and described by Presl as *T. humilis*, stems from Perú and almost certainly never occurred in Chile. Gay in his *Flora Chilena* (1854:14, 16-17) already expressed doubts regarding the occurrence of *T. humilis* and *T. paleacea* in Chile.

The situation is different with the Claude Gay specimen, where no such mislabelling has been reported. The type specimen of *Tillandsia chilensis* Baker is at Paris (P), with the locality "Chili" printed, not with Gay's manuscript.

The travels of Gay have been documented by Muñoz (1944). It becomes evident, that Gay in Chile never collected farther north than Puerto Inglés (Caldera) at 27° 07' S (in the year 1841), not reaching the northernmost parts of the country, where *T. paleacea*, if occurring in Chile, could be expected. Nevertheless, Gay visited Perú from June 1839 to April 1840, where he might have collected the locally fairly common *T. paleacea*.

Investigated specimens cited above

Haenke, T. s.n. (PR 25267); Chile (PR, holo!)
Gay, C. s.n.; Chili (P; type of *T. chilensis* Baker)

THE GENUS *TILLANDSIA* IN CHILE

Leaving *T. paleacea* as doubtful aside and including *T. marconae*, now 6 species of the genus *Tillandsia* are recorded for Chile:

Tillandsia capillaris Ruiz & Pavon, Fl. Peruv. et Chil. 3:42, 1802. Saxicolous or epiphytic; Chile, Perú, Bolivia and Argentina.

Tillandsia geisei Phil., Gartenflora 38: 369, 1889. Epiphytic, often on cacti and *Euphorbia lactiflua*, rarely saxicolous; a narrow endemic to the "lomas vegetation" in northern Chile.

Tillandsia landbeckii Phil., Linnaea 33: 248, 1864. Terrestrial and epiphytic; coastal desert of Chile and southern Perú.

Tillandsia marconae Till & Vitek, Pl. Syst. Evol. 149: 143, 1985. Terrestrial, on sand; endemic to northern Chile and southern Perú.

Tillandsia tragophoba Dillon, Brittonia 43(1): 11, 1991. Saxicolous; narrow endemic to the "lomas vegetation" in northern Chile (province Antofagasta), strange enough for that habitat, the species has the habit of a tank bromeliad.

Tillandsia usneoides (L.)L., Sp. Pl. ed. 2: 411, 1762. Epiphytic; widespread, from U.S.A. to Argentina and Chile.

For habitat of some of these species see Dillon (1991) and Zizka (1992). Regarded as a distinct species (Till, 1984) or a form of *T. capillaris* (Smith & Downs, 1977), the taxonomic rank of *T. virescens* Ruiz & Pavon is subject to discussion. A detailed account of the genus for the "Flora de Chile" is in preparation.

ACKNOWLEDGEMENTS

The directors of the herbaria of Departamento de Botánica, Universidad de Concepción (CONC); Institut für Systematische Botanik der Universität, München (M); Laboratoire de Phanérogamie, Museum National d'Histoire Naturelle, Paris (P); Museo Nacional de Historia Natural, Santiago (SGO); Institut für Spezielle Botanik der Universität, Wien (WU); Natural History Museum, Prag (PR) for the loan of material.

Dra. Elvira Grob (Heidelberg), Harry E. Luther (Sarasota), Prof. Dr. Oscar Matthei (Concepción) and Dr. Walter Till (Wien) for comments and informations. Sr. Andrés Moreira for the map drawing.

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Contribución recibida: 04.12.93; aceptada: 29.12.93.