



## A new endangered species of *Chusquea* (Poaceae: Bambusoideae) from the Acatlán volcano in central Veracruz, Mexico, and keys to the Mexican *Chusquea* species

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### Abstract

Mexico has 19 species of the diverse neotropical bamboo genus *Chusquea*, 15 of them growing in Neotropical cloud forests, with ten of those 19 species endemic to Mexico. The cloud forest is one of the most threatened types of vegetation in Mexico. Based on fieldwork at the Acatlán volcano in the Mexican state of Veracruz and morphological analysis of live and herbarium specimens, here we describe and illustrate a new endemic and endangered *Chusquea* species. *Chusquea enigmatica* is a narrow endemic to volcano Acatlán and has an unusual reduction of vegetative morphological characters. *Chusquea enigmatica* is compared with *C. glauca*, *C. muelleri* and *C. repens*, from which it can be separated by its delicate and erect culms, extravaginal or intravaginal branching pattern and reduction of bud size. *Chusquea enigmatica* only inhabits the rim of the volcano Acatlán in cloud forest dominated by *Fagus grandifolia* in small patches, for which reason we propose to include this species in the IUCN red list under the “endangered” category of protection. Keys to the currently recognized species of *Chusquea* in Mexico are also provided.

**Keywords:** Bambusoideae, Chusqueinae, endemic, Neotropical cloud forest, Trans-Mexican Volcanic Belt, woody bamboo

### Resumen

México tiene 19 especies del género de bambú neotropical más diverso, *Chusquea*, donde 15 especies crecen en el bosque mesófilo de montaña, con diez de las 19 especies endémicas a México. El bosque mesófilo es uno de los tipos de vegetación más amenazados en México. Basados en trabajo de campo realizado en el volcán de Acatlán en el estado de Veracruz, México y en el análisis morfológico de especímenes vivos y de herbario, describimos e ilustramos una nueva especie endémica y amenazada de *Chusquea*. *Chusquea enigmatica* se compara con *C. glauca*, *C. muelleri* y *C. repens*, de las cuales se puede separar por tener culmos delicados y erectos, ramificación extravaginal o intravaginal y reducción del tamaño de las yemas. *Chusquea enigmatica* solo habita en la cima del volcán de Acatlán en bosque mesófilo de montaña, dominado por *Fagus grandifolia* en pequeños parches, razón por la cual proponemos que esta especie se incluya en la lista roja de la IUCN en la categoría de protección “amenazada”. También se presentan claves de identificación para las especies mexicanas de *Chusquea*.

### Introduction

The *bosque mesófilo de montaña* (Rzedowski 1978) or Neotropical cloud forest (*sensu* Webster 1995) is one of the more threatened types of vegetation in Mexico as well as in Mesoamerica. Less than 1% of the total area remains and has been replaced by other, mainly secondary, vegetation types (Rzedowski 1996; Aldrich *et al.* 2000; Luna-Vega *et al.* 2000). However this vegetation type possesses a great biodiversity and provides important

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