

A Festschrift for  
**William  
G. D'Arcy**

*The Legacy of a Taxonomist*

*Edited by*

*Richard C. Keating*

*Victoria C. Hollowell*

*and*

*Thomas B. Croat*



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## JALTOMATA (SOLANACEAE) OF COSTA RICA

Thomas Mione and Leon Yacher

**ABSTRACT.** Three species of *Jaltomata* (Solanaceae) are recognized based on comparative morphology, including principal components analysis of morphological characteristics. *Jaltomata procumbens* grows from 1000 to 2900 m in Costa Rica and is distinguished by its straight filaments, anthers of uniform size, and straight styles. *Jaltomata repandidentata* grows from 400 to 1200 m, is characterized by its sigmoid filaments, anther size variation within the flower, and curved styles, and is reported from Central America for the first time. *Jaltomata darcyana* is a new species of the seasonally dry Pacific Coast, found from 0 to 320 m; it has straight filaments, anther size variation within the flower, and curved styles. The former two species are protogynous: anther dehiscence occurs the day after the flower opens. *Jaltomata darcyana*, however, lacks a pistillate phase and is functionally hermaphroditic when the flower opens. The first chromosome count for *J. darcyana* is reported:  $2n = 24$ . A key to the *Jaltomata* of Costa Rica is included.

**RESUMEN.** Tres especies de *Jaltomata* (Solanaceae) son reconocidas basándose en morfología comparada, incluyendo análisis de componentes principales (PCA) de caracteres morfológicos. *Jaltomata procumbens* es una especie que crece comúnmente entre los 1000–2900 m en Costa Rica y se distingue por presentar filamentos rectos, anteras de tamaño uniforme y estilos rectos. *Jaltomata repandidentata* es una especie que crece comúnmente entre los 400–1200 m; se caracteriza por tener filamentos sigmoides, anteras de tamaño variable dentro de la misma flor, estilos curvados, y se reporta por la primera vez para América Central. Se describe *Jaltomata darcyana*, una nueva especie de la región de la costa estacionalmente seca del Pacífico de Costa Rica; tiene filamentos rectos, anteras de tamaño variable en cada flor, estilos curvados, y crece entre 0–320 m. Las dos primeras especies son protóginas: la dehiscencia de las anteras ocurre un día después la apertura de la flor. Por otro lado, *J. darcyana* no tiene una fase pistilada y es funcionalmente hermafrodita al abrirse la flor. Se reporta por primera vez el número de cromosomas de *J. darcyana*:  $2n = 24$ . Se incluye una clave para el género *Jaltomata* en Costa Rica.

**Key words:** Costa Rica, epiphyte, *Jaltomata*, Solanaceae.

