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Evolutionary diversification and historical biogeography of orchidaceae in Central America with emphasis on Costa Rica and Panama

Bogarin Chaves, D.G.

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Author: Bogarin Chaves, D.G.

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PROPOSITIONS

accompanying the Ph.D thesis

*Evolutionary diversification and historical biogeography
of Orchidaceae in Central America
with emphasis on Costa Rica and Panama*

Diego Bogarín

I

The *Lepanthes* clade comprises fourteen genera supported by morphological and molecular evidence –chapter 3

II

Multi-locus datasets and coalescent-based estimations methods resolve phylogenetic relationships in orchid species complexes – chapter 4

III

New species of *Lepanthes* are continuously discovered throughout the Neotropics – chapters 4-5

IV

Trichosalpinx spp. are pollinated exclusively by female biting midges – chapter 6

V

Neotropical mountain ranges do not constrain orchid dispersal over long timescales – chapter 8

VI

Lepanthes is one of the six most species-rich plant groups in the Neotropics

VII

Most of the Neotropical hyper-diverse orchid lineages originated recently

VIII

Phylogenetic comparative methods enable the discovery of diagnostic traits for generic delimitations in the Orchidaceae

IX

A hypothesis must be tested with multiple lines of evidence

X

There must be a limit to the number of taxonomical novelties (Robert L. Dressler)