

## Lapsiines and hisponines as phylogenetically basal salticid spiders (Araneae: Salticidae)

WAYNE P. MADDISON<sup>1</sup> & KAREN M. NEEDHAM<sup>2</sup>

<sup>1</sup>Departments of Zoology and Botany and Centre for Biodiversity Research, University of British Columbia,  
6270 University Boulevard, Vancouver, British Columbia, V6T 1Z4, Canada.

<sup>2</sup>Spencer Entomological Museum, Department of Zoology, University of British Columbia, 6270 University  
Boulevard, Vancouver, British Columbia, V6T 1Z4, Canada.

### Abstract

Increased phylogenetic resolution of the basal lineages of salticid spiders will help us understand their early evolution and provide better outgroups for phylogenetic studies within the major clades. We gathered sequences of nuclear and mitochondrial gene regions (28S, 18S, Histone 3, 16S-ND1, CO1) and used them to reconstruct salticid phylogeny by parsimony, likelihood and Bayesian methods. Our results confirm that lapsiines and hisponines are among the basal salticids, i.e. outside the major clade Salticoida. The lapsiines are resolved as sister group to the spartaeines. The precise placement of hisponines is unclear, but they may represent a deep-branching lineage independent from the spartaeines.

**Key words** : Araneae, Salticidae, *Thrandin* & *Galianora*, *Hispo*, *Masagris*, *Tomocyrba* & *Goleba*, lapsiines, Hisponinae, Spartaeinae, Lyssomaninae, jumping spider, basal groups, phylogeny

### Introduction

Morphological and molecular data have begun to resolve the basal phylogenetic structure of salticid spiders (Wanless, 1980, 1982, 1984, Rodrigo & Jackson, 1992, Maddison, 1988, 1996, Wijesinghe, 1992, 1997, Maddison & Hedin, 2003). One of the best corroborated clades is the Salticoida (Maddison & Hedin, 2003), within which falls the vast majority of salticids, about 95% of the approximately 5000 described species (Platnick, 2005). Excluded from the Salticoida are three much smaller groups: the lyssomanines, the spartaeines, and the *Cocalodes* group. Six extant Old World and 2 New World genera are placed in the Lyssomaninae (Wanless, 1980, Logunov, 2004); 15 genera, entirely from the Old World, are placed in the Spartaeinae (Wanless, 1984, Wijesinghe, 1992, Žabka &